

Chapter 173-308 WAC

BIOSOLIDS MANAGEMENT

WAC

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WAC 173-308-010 Authority and purpose. (1)

Authority. This chapter is adopted under the authority of chapters 70.95J and 70.95 RCW.

(2) Purpose.

(a) The purpose of this chapter is to protect human health and the environment when biosolids are applied to the land. This chapter encourages the maximum beneficial use of biosolids, and is intended to conform to all applicable federal rules adopted under the Federal Clean Water Act as it existed on February 4, 1987.

(b) This chapter establishes permitting requirements for treatment works treating domestic sewage that engage in applicable biosolids treatment or management practices, including any person, site, or facility that has been designated as a treatment works treating domestic sewage.

(c) This chapter establishes standards for the treatment, quality, and management of municipal sewage sludge and domestic septage that are directly enforceable, and that allow these materials to be classified and managed as biosolids.

(d) This chapter establishes requirements, standards, management practices, and monitoring, recordkeeping and reporting requirements that are applicable when biosolids are applied to the land and when municipal sewage sludge is dis-

posed in a municipal solid waste landfill unit as defined in WAC 173-351-100.

(e) This chapter establishes fees for permits issued to facilities that engage in applicable biosolids management activities.

Fees under WAC 173-308-320 do not apply to persons whose activity is limited to pumping, hauling, temporarily storing, or delivering septage or biosolids to other facilities or land application sites, if:

(i) They do not engage in the treatment of the septage or biosolids;

(ii) They have not been designated as a treatment works treating domestic sewage; and

(iii) The generating and receiving facility or land application site is in compliance with the requirements of WAC 173-308-310.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-010, filed 2/18/98, effective 3/21/98.]

WAC 173-308-020 Applicability. (1) Unless otherwise specified in this chapter, these rules apply to the following:

(a) A person who prepares biosolids;

(b) A person who stores biosolids;

(c) A person who applies biosolids to the land;

(d) Biosolids that are applied to the land;

(e) The land where biosolids are applied;

(f) The owner and lease-holder of land where biosolids are applied;

(g) A person who disposes of municipal sewage sludge in a municipal solid waste landfill;

(h) Municipal sewage sludge that is disposed of in a municipal solid waste landfill.

(2) This chapter does not apply to the following municipal sewage sludge and biosolids management facilities and practices:

(a) The firing of municipal sewage sludge in an incinerator.

(b) The placing or disposal of municipal sewage sludge or biosolids in facilities other than municipal solid waste landfills.

(3) Except as provided in (a) and (g) of this subsection, the following solid wastes are not regulated under this chapter:

(a) Sludge generated at an industrial facility during the treatment of industrial wastewater, including sewage sludge generated during the treatment of industrial wastewater combined with domestic sewage; sludge generated at an industrial facility during the treatment of only domestic sewage is considered municipal sewage sludge subject to the requirements of this chapter.

(b) Sewage sludge determined to be hazardous in accordance with chapter 70.105 RCW or rules adopted thereunder.

(c) Sewage sludge with a concentration of polychlorinated biphenyls (PCBs) equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis).

(d) Ash generated during the firing of municipal sewage sludge or biosolids in an incinerator.

(e) Grit or screenings generated during preliminary treatment of domestic sewage in a treatment works.

(f) Sludge generated during the treatment of either surface water or ground water used for drinking water.

(g) Commercial septage, industrial septage, or a mixture of domestic septage and commercial or industrial septage; on a case-by-case basis, on request of the person who applies septage to the land or at the department's discretion, the department may designate the septage in this subsection (3)(g) as septage that is domestic in quality, and require the septage to be managed in accordance with the provisions of this chapter.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-020, filed 2/18/98, effective 3/21/98.]

WAC 173-308-030 Relationship to other regulations.

In addition to the requirements of this chapter, other laws, regulations, and ordinances may also apply to biosolids. These include but are not limited to the following:

(1) Commercial fertilizers are subject to regulation by the Washington state department of agriculture. The following statutes and rules apply to biosolids meeting the definition of a commercial fertilizer under chapter 15.54 RCW:

(a) Chapter 15.54 RCW - Fertilizers, minerals, and limes; and chapter 16-200 WAC - rules relating to fertilizers, minerals and limes, including requirements for labeling, licensing, and registration;

(b) Chapter 19.94 RCW - Weights and measures; and chapter 16-666 WAC - Weights and measures—Packaging and labeling regulations.

(2) Except as required in WAC 173-308-100, the transportation of biosolids or municipal sewage sludge is subject to regulation by the Washington state utilities and transportation commission under Title 81 RCW.

(3) Facilities required to obtain permits under WAC 173-308-310 must comply with the requirements in chapter 43.21C RCW and the State Environmental Policy Act rules adopted under chapter 197-11 WAC. Public notice and hearing requirements under the State Environmental Policy Act may be coordinated with the similar requirements of this chapter.

(4) Biosolids facilities and sites where biosolids are applied to the land must comply with other applicable federal, state and local laws including zoning and land use requirements. Enforcement of other laws and regulations is the responsibility of the agency with jurisdiction.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-030, filed 2/18/98, effective 3/21/98.]

WAC 173-308-040 Direct enforceability. All persons and facilities subject to the requirements of this chapter must comply with these rules on the effective date of the applicable regulation, regardless of whether or not a permit has been issued under WAC 173-308-310.

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[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-040, filed 2/18/98, effective 3/21/98.]

WAC 173-308-050 Delegation of authority. (1) Upon the request of a local health department, the department may delegate authority to implement and assist in the administration of appropriate portions of this chapter.

Delegation must be consistent with any applicable state-EPA agreement regarding delegation of federal biosolids program authority.

(2) Method of delegation.

(a) Delegation will be accomplished through an instrument of mutual consent that is acceptable to both the department and the local health department seeking delegation.

(b) The department may revoke part or all of a delegation of authority under this section if it finds that a local health department has failed to adequately carry out any portion of a delegated responsibility.

(c) As an alternative to revocation of local delegation under (b) of this subsection, the department may correct any deficiencies in a locally approved state permit element by implementing the requirements of this chapter in a separate state approved land application plan or permit. In such case the requirements of the state plan or permit will be in addition to or take precedent over local requirements.

(3) Contents of delegation agreements. At a minimum, delegation agreements must specify the authorities and responsibilities that are being delegated to a local health department. Other authorities and responsibilities are assumed to be retained by the department.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-050, filed 2/18/98, effective 3/21/98.]

WAC 173-308-060 Biosolids not classified as solid waste. (1) The state of Washington recognizes biosolids as a valuable commodity. Biosolids are not solid waste and are not subject to regulation under solid waste laws.

(2) Municipal sewage sludge or septage that fails to meet standards for classification as biosolids is a solid waste, and may not be applied to the land.

(3) Municipal sewage sludge or septage that will be disposed in a landfill is a solid waste.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-060, filed 2/18/98, effective 3/21/98.]

WAC 173-308-070 Use of term, "biosolids"—Explanation. Biosolids is a term adopted in state statute to distinguish municipal sewage sludge that is suitable for land application from that which is not. Under state law biosolids includes both municipal sewage sludge and septage that meet applicable criteria. Federal rules do not use the term "biosolids," and rely instead on the term "sewage sludge," which under the federal system includes domestic septage. Some federal guidance documents do use the term biosolids. Unless the context requires otherwise, biosolids is the term used in this chapter to refer to municipal sewage sludge or septage that has been or is being treated to meet standards so that it can be applied to the land. Material that will be disposed in a landfill is considered municipal sewage sludge. When the term septage is used, the reference is exclusively to septage.

(2/18/98)

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-070, filed 2/18/98, effective 3/21/98.]

WAC 173-308-080 Definitions. Unless the department determines that the context of the rule requires otherwise, the following definitions are applicable for the purposes of this chapter.

"Administrator" means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

"Aerobic digestion" is the biochemical decomposition of organic matter in biosolids into carbon dioxide and water by microorganisms in the presence of air. Aerobic digestion does not include composting.

"Agricultural land" is land on which a food crop, feed crop, or fiber crop is grown. This includes range land and land used as pasture.

"Agronomic rate" is the whole biosolids application rate (dry weight basis) that will provide the amount of nitrogen required for optimum growth of vegetation, and that will not result in the violation of applicable standards or requirements for the protection of ground or surface water as established under chapter 90.48 RCW and related rules including chapters 173-200 and 173-201 WAC.

"Anaerobic digestion" is the biochemical decomposition of organic matter in biosolids into methane gas and carbon dioxide by microorganisms in the absence of air. Anaerobic digestion does not include composting.

"Annual pollutant loading rate" is the maximum amount of a pollutant that can be applied to a unit area of land during a three hundred sixty-five-day period.

"Annual whole biosolids application rate" is the maximum amount of biosolids (dry weight basis) that can be applied to a unit area of land during a three hundred sixty-five-day period.

"Apply biosolids or biosolids applied to the land" means the land application of biosolids for the purpose of beneficial use.

"Beneficial use facility" means a site or sites where biosolids are applied to the land for beneficial use, which has been permitted as a treatment works treating domestic sewage in accordance with the provisions of WAC 173-308-310, and that has been designated as a beneficial use facility through the permitting process.

"Beneficial use of biosolids" means the application of biosolids to the land for the purposes of improving soil characteristics including tilth, fertility, and stability and enhancing the growth of vegetation consistent with protecting human health and the environment.

"Biosolids" means municipal sewage sludge that is a primarily organic, semisolid product resulting from the wastewater treatment process, that can be beneficially recycled and meets all applicable requirements under this chapter. Biosolids includes a material derived from biosolids, and septic tank sludge, also known as septage, that can be beneficially recycled and meets all applicable requirements under this chapter. For the purposes of this rule, semisolid products include biosolids or products derived from biosolids ranging in character from mostly liquid to fully dried solids.

"Bulk biosolids" means biosolids that are not sold or given away in a bag or other container for application to the land.

"Ceiling concentration" means the maximum concentration of a pollutant in any biosolids sample, beyond which level the biosolids would be classified as municipal sewage sludge not suitable for application to the land. Ceiling concentrations are established in Table 1 of WAC 173-308-160.

"Class I biosolids management facility" is any publicly owned treatment works (POTW), as defined in 40 CFR 501.2, required to have an approved pretreatment program under 40 CFR 403.8(a) (including any POTW located in a state that has elected to assume local program responsibilities under 40 CFR 403.10(e)), and any treatment works treating domestic sewage, as defined in 40 CFR 122.2, classified as a Class I biosolids management facility by the EPA Regional Administrator, or in the case of approved state programs, the Regional Administrator in conjunction with the state director, because of the potential for its biosolids use or disposal practice to affect public health and the environment adversely.

"Clean Water Act" or "CWA" means the Clean Water Act or Federal Clean Water Act (FCWA) (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, Public Law 97-117, and Public Law 100-4.

"Composting" means the controlled biological degradation of organic solid waste yielding a product for use as a soil conditioner. This does not include the treatment of sewage sludge in a digester at a wastewater treatment plant.

"Cumulative pollutant loading rate" is the maximum amount of a pollutant that can be applied to an area of land from biosolids that exceed the pollutant concentration limits established in Table 3 of WAC 173-308-160.

"Density of microorganisms" is the number of microorganisms per unit mass of total solids (dry weight) in the biosolids.

"Department" means the Washington state department of ecology and, within the scope of its delegation, a local health department that has been delegated authority under WAC 173-308-050.

"Director" means the director of the department of ecology or his or her authorized representative.

"Disposal on an emergency basis" means a period up to but not exceeding one year. Generally, emergency situations requiring the use of disposal facilities will normally occur as a result of inclement weather conditions at a beneficial use site, contractual or technical difficulties in the treatment, transportation, or application of the biosolids, or as a result of short term economic or administrative barriers, any and all of which are expected to be resolved within a period of one year.

"Disposal on a long-term basis" means to adopt disposal as a preferred method of management for at least five years, or for an indefinite period of time with no expectation for pursuing other management alternatives.

"Disposal on a temporary basis" means a period of more than one but less than five years. Generally, situations requiring the temporary use of disposal facilities will nor-

mally occur as a result of deficiencies in the wastewater or biosolids treatment process, or economic, administrative, or contractual constraints which cannot be resolved in less than one year.

"Domestic septage" means domestic septage - Class I, Class II, or Class III as defined in this section.

"Domestic septage - Class I" is liquid or solid material removed from domestic septic tanks, cess pools, or similar treatment works that receive only domestic sewage, and that has had a sufficiently long residency time to be considered largely stabilized. For the purposes of managing mixed loads or batches of septage, a load or batch is considered Class I if it does not exceed twenty-five percent by volume of Class II domestic septage or twenty-five percent by volume of restaurant grease trap waste, unless otherwise approved by the regulatory authority.

"Domestic septage - Class II" is liquid or solid material removed from portable toilets, type III marine sanitation devices, vault toilets, pit toilets, RV holding tanks or other similar holding systems that receive only domestic sewage.

"Domestic septage - Class III" is liquid or solid material removed from domestic septic tanks, cess pools, or similar treatment works that receive sewage from commercial or industrial sources, but which the department has determined to be domestic in quality under WAC 173-308-020 (3)(g).

"Domestic septage managed as biosolids originating from municipal sewage sludge" means domestic septage managed as if it had originated from a sewage treatment process at a publicly owned treatment works.

"Domestic sewage" is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

"Dry weight basis" means calculated on the basis of having been dried at 105°C until reaching a constant mass (i.e., essentially one hundred percent solids content).

"EPA" means the United States Environmental Protection Agency.

"Exceptional quality biosolids" means biosolids that meet the pollutant concentration limits in Table 3 of WAC 173-308-160, the Class A pathogen reduction requirements in one of WAC 173-308-170 (2)(a) through (f), and the vector attraction reduction requirements in one of WAC 173-308-180 (2) through (7).

"Facility" means a treatment works treating domestic sewage as defined in this chapter, unless the context of the rule requires otherwise. For the purposes of this chapter a facility is considered to be new if it has not been previously approved for the treatment, storage, use, or disposal of biosolids.

"Feed crops" are crops produced primarily for consumption by animals.

"Fiber crops" are crops such as flax and cotton, including but not limited to those whose parts or by-products may be consumed by humans or used in the production or preparation of food for human consumption.

"Food crops" are crops consumed by humans. These include, but are not limited to, fruits, vegetables, grains, and tobacco.

"Forest" is an area of land that is managed for the production of timber or other forest products, or for benefits such

as recreation and watershed protection, and that is or will be dominated by trees under the current system of management. For the purposes of this rule, other areas of land that are not regulated as agricultural land, public contact sites, land reclamation sites, or lawns or home gardens are considered forest-land.

"General permit," for the purposes of this chapter, means a permit issued by the department in accordance with the procedures established in this chapter or in chapter 173-226 WAC, to be effective in a designated geographical area, that authorizes the application of biosolids to the land or the disposal of biosolids in a municipal solid waste landfill, under which multiple treatment works treating domestic sewage may apply for coverage.

"Geometric mean" means the antilogarithm of the arithmetic average of the logarithms of the sample values, or the nth root of the product of n sample values.

"Ground water" means water in a saturated zone or stratum beneath the surface of land or below a surface water body.

"Health department" or "local health department" means city, county, city-county, or district public health department as defined in chapters 70.05, 70.08, and 70.46 RCW.

"Individual permit," for the purposes of this chapter, means a permit issued by the department to a single treatment works treating domestic sewage in accordance with WAC 173-308-310, which authorizes the application of biosolids to the land or the disposal of biosolids in a municipal solid waste landfill.

"Industrial wastewater" is wastewater generated in a commercial or industrial process.

"Land application" is the application of biosolids to the land surface by means such as spreading or spraying; the injection of biosolids below the land surface; or the incorporation of biosolids into the soil, for the purpose of beneficial use.

"Land with a low potential for public exposure" is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

"Land with a high potential for public exposure" is land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a city).

"Local health department" see definition of health department.

"Monthly average" is the arithmetic mean of all measurements taken during the month.

"Municipal sewage sludge" means sewage sludge generated from a publicly owned treatment works. For the purposes of this chapter, sewage sludge generated from the treatment of only domestic sewage in a privately owned or industrial treatment facility is considered municipal sewage sludge.

"Municipality" means a city, town, borough, county, parish, district, association, or other public body (including an inter-municipal agency of two or more of the foregoing entities) created by or under state law; or a designated and

approved management agency under section 208 of the Clean Water Act, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201(e) of the Clean Water Act, as amended, that has as one of its principal responsibilities the treatment, transport, use, or disposal of biosolids.

"Other container" is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

"Owner" means any person with ownership interest in a site or facility, or who exercises control over a site or facility, but does not include a person who, without participating in management of the site or facility, holds indicia of ownership primarily to protect the person's security interest.

"Pasture" is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

"Pathogenic organisms" are disease causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

"Permit" means an authorization, license, or equivalent control document issued by the director to implement the requirements of this chapter.

"Person" is an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof.

"Person who prepares biosolids" is either the person who generates biosolids during the treatment of domestic sewage in a treatment works or the person who derives a material from biosolids.

"pH" means the logarithm of the reciprocal of the hydrogen ion concentration.

"Place sewage sludge" or **"sewage sludge placed"** means to dispose of sewage sludge.

"Pollutant" is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

"Pollutant limit" is a numerical value that describes the amount of a pollutant allowed per unit amount of biosolids (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); the volume of a material that can be applied to a unit area of land (e.g., gallons per acre); or the number of pathogens or indicator organisms per unit of biosolids. Pollutant limits are established in Tables 1 - 4 of WAC 173-308-160, in 173-308-170, and in 173-308-270.

"Public contact site" is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

"Publicly owned treatment works" means a treatment works treating domestic sewage that is owned by a municipality, the state of Washington, or the federal government.

"Range land" is generally open, uncultivated land dominated by herbaceous or shrubby vegetation that may be used for grazing or browsing, either by wildlife or livestock.

"Receiving-only facility" means a treatment works treating domestic sewage that only receives municipal sewage sludge or biosolids from other sources for further treatment and/or application to the land, and which does not generate any biosolids from the treatment of domestic sewage.

"Reclamation site" is drastically disturbed land that is reclaimed using biosolids. This includes, but is not limited to, strip mines and construction sites.

"Residential equivalent value" means the number of residential equivalents determined for a facility under chapter 173-224 WAC or a value similarly obtained under WAC 173-308-320.

"Restrict public access" means to minimize access of nonessential personnel to land where biosolids are applied, through the use of natural or artificial barriers, signs, remoteness, or other means.

"Saturated zone" means the zone below the water table in which all interstices are filled with water.

"Sewage sludge" is solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

"Significant change in biosolids management practices" means a change in the quality of biosolids that are applied to the land, either from class A to class B for pathogens, or from Table 3 to Table 1 of WAC 173-308-160 for pollutant limits; the addition of a new area to which biosolids will be applied, which was not previously disclosed during a required public notice process; for class B biosolids only, a change from nonfood crops to food crops, a change from crops where the harvestable portions do not contact the biosolids/soil mixture to crops where the harvestable portion contacts the biosolids/soil mixture, or a change in site classification from land with a low potential for public exposure to land with a high potential for public exposure; or any change or deletion of a requirement established in an approved land application plan or established as a condition of coverage under a permit that would result in a decrease in buffer size, site monitoring, or facility reporting requirements, which was not otherwise provided for in the permit or plan approval process.

"Significantly remove or reduce recognizable materials" means to remove recognizable debris from biosolids by means such as screening, or to reduce the number of recognizable items in biosolids by means such as grinding, to a level that in the opinion of the department, will not result in an aesthetic nuisance or physical hazard when biosolids are applied to the land.

"Site" means all areas of land, including buffer areas, which are identified in the scope of an approved site specific land application plan. A site is considered to be new or expanded when biosolids are applied to an area not approved in a site specific land application plan or that was not previously disclosed during a required public notice process.

"Specific oxygen uptake rate (SOUR)" is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the biosolids.

"State" means the state of Washington.

"Store or storage of biosolids" is the placing of biosolids on land on which the biosolids remain for two years or less. This does not include the placing of biosolids on land for treatment or disposal.

"Stover" is the nongrain, above-ground part of a grain crop, often corn or sorghum.

"Surface waters of the state" means surface waters of the state as defined in WAC 173-201A-020.

"Total solids" are the materials in biosolids that remain as residue when the biosolids are dried at 103 to 105°C.

"Treat or treatment of biosolids" is the preparation of biosolids for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of biosolids. This does not include storage of biosolids.

"Treatment works" is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

"Treatment works treating domestic sewage" means a publicly owned treatment works or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage or sewage sludge, including land dedicated for the disposal of sewage sludge. Treatment works treating domestic sewage also includes a beneficial use facility that has been permitted in accordance with the provisions of WAC 173-308-310, and a person, site, or facility designated as a treatment works treating domestic sewage in accordance with WAC 173-308-310 (1)(b). This definition does not include septic tanks or similar devices, but may include persons or vehicles that service septic systems and centralized septage facilities that are designated as a treatment works treating domestic sewage or are applicable under this definition.

"Unstabilized solids" are organic materials in biosolids that have not been treated in either an aerobic or anaerobic treatment process.

"Vector attraction" is the primarily odorous characteristic of biosolids that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

"Volatile solids" is the amount of the total solids in biosolids that are lost when the biosolids are combusted at 550°C in the presence of excess air.

"Waters of the state" means waters of the state as defined in RCW 90.48.020.

"Wetlands" means those areas that are inundated or saturated by surface water or ground water at a frequency and duration to support, and that under normal circumstances do

support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-080, filed 2/18/98, effective 3/21/98.]

WAC 173-308-090 Requirement for a person who prepares biosolids. Any person who prepares biosolids must ensure that the applicable requirements in this chapter and any applicable permit issued under this chapter are met when the biosolids are applied to the land.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-090, filed 2/18/98, effective 3/21/98.]

WAC 173-308-100 Requirement for a person who transports biosolids. (1) Any person who transports biosolids must ensure that the transportation vehicle is properly cleaned prior to use of the vehicle for the transportation of food crops, feed crops, or fiber crops.

(2) The transportation of biosolids is otherwise subject to regulation by the Washington state utilities and transportation commission under Title 81 RCW and WAC 173-308-030(2).

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-100, filed 2/18/98, effective 3/21/98.]

WAC 173-308-110 Requirement for a person who applies biosolids. A person may not apply biosolids to the land except in accordance with applicable requirements of this chapter and any applicable permit issued under this chapter.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-110, filed 2/18/98, effective 3/21/98.]

WAC 173-308-120 Requirement to obtain and provide information. (1) It is a violation of the provisions of this chapter for any person to falsify a certification or statement that is required by these rules or to make any required certification or statement under false pretense.

(2) Any person who applies biosolids to the land must obtain information needed to comply with the requirements of this chapter.

(3) The person who prepares biosolids must provide the person who applies biosolids to the land with notice and necessary information to comply with the requirements of this chapter, including sufficient information on the concentration and types of nutrients in the biosolids needed to determine an agronomic rate for the crop under management.

(4) When a person who prepares biosolids provides the biosolids to another person who further prepares the biosolids, the person who provides the biosolids must provide the person who receives the biosolids notice and necessary information to comply with the requirements of this chapter.

(5) The person who applies bulk biosolids to the land must provide the owner or lease holder of the land on which the bulk biosolids are applied notice and necessary information to comply with the requirements of this chapter.

(6) The person who applies bulk biosolids to the land must obtain written approval of the landowner prior to applying biosolids to the land for the first time, when the bulk bio-

solids do not meet the criteria to be classified as exceptional quality.

(7) All persons required to keep and maintain records under any provision of this chapter must provide access to those records during normal business hours to a representative of the department, a local health department, or the United States EPA, and to the owner, lessor, lessee or other person with a legal management interest in the land on which the biosolids are applied, at the location where the records are kept.

(8) Any facility, including a beneficial use facility, must immediately notify all sources from which it receives biosolids, if at any time it becomes unsuitable for the purpose of receiving biosolids from those other sources.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-120, filed 2/18/98, effective 3/21/98.]

WAC 173-308-130 Additional or more stringent requirements. On a case-by-case basis, the department may impose requirements for the beneficial use of biosolids that are in addition to or more stringent than the requirements in this chapter if the department believes that the additional or more stringent requirements are necessary to protect public health and the environment from any adverse effect of a pollutant in the biosolids.

(1) In addition to other considerations, failure of a generator, applier, or landowner to conform to any applicable requirements of this chapter may be cause to impose additional or more stringent requirements.

(2) The department will impose any additional or more stringent requirements under WAC 173-308-130 in a permit issued to the applicable facility.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-130, filed 2/18/98, effective 3/21/98.]

WAC 173-308-140 Biosolids sampling and analysis methods. (1) **Sampling.** Samples that are collected and analyzed must be representative of the biosolids that are applied to the land.

(2) **Analysis methods.** The publications listed in this subsection are incorporated by reference in this chapter. Methods in the publications listed below must be used to analyze samples of biosolids unless other methods are approved in writing by the department. These publications are available for review during normal working hours at the Washington State Department of Ecology headquarters located at 300 Desmond Drive in Olympia, Washington.

(a) For enteric viruses use ASTM Designation: D 4994-89, "Standard Practice for Recovery of Viruses From Wastewater Sludges," 1992 Annual Book of ASTM Standards: Section 11-Water and Environmental Technology, ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

(b) For fecal coliform use part 9221 E. or part 9222 D., "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street NW, Washington, DC 20005.

(c) For helminth ova use Yanko, W.A., "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges," EPA 600/1-87-014, 1987. National Technical Informa-

tion Service, 5285 Port Royal Road, Springfield, VA 22161 (PB 88-154273/AS).

(d) For inorganic pollutants use, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987). Second Edition and Updates I and II are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (PB 87-190-291). Third Edition and Revision I are available from Superintendent of Documents, Government Printing Office, 941 North Capitol Street NE, Washington, DC 20002 (Document Number 955-001-00000-1).

For the analysis of nitrogen and other nutrients the department may specify additional analytical references that are acceptable.

(e) For salmonella sp. bacteria use part 9260 D., "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street NW, Washington, DC 20005; or Kenner, B.A. and H.P. Clark, "Detection and enumeration of Salmonella and Pseudomonas aeruginosa," Journal of the Water Pollution Control Federation, Vol. 46, no. 9, September 1974, pp. 2163-2171. Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314.

(f) For specific oxygen uptake rate (SOUR) use part 2710 B., "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street NW, Washington, DC 20005.

(g) For total, fixed, and volatile solids use part 2540 G., "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992, American Public Health Association, 1015 15th Street NW, Washington, DC 20005.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-140, filed 2/18/98, effective 3/21/98.]

WAC 173-308-150 Frequency of biosolids monitoring. The person who prepares biosolids is responsible for ensuring that monitoring is carried out in accordance with the requirements of this chapter and any applicable permit. The minimum frequency of monitoring for the pollutants listed in Tables 1, 2, 3 and 4 of WAC 173-308-160; the pathogen density requirements in WAC 173-308-170; and the vector attraction reduction requirements in WAC 173-308-180, is prescribed in subsection (3) of this section;

(1) The frequency of monitoring required by this section is based on the dry weight tonnage of bulk biosolids applied to the land per three hundred sixty-five-day period, or the dry weight tonnage of biosolids received per three hundred sixty-five-day period by a person who prepares biosolids that are sold or given away for application to the land.

(2) After the biosolids have been monitored for two years at the frequency in subsection (3) of this section, the person who prepares the biosolids may request the department to reduce the frequency of monitoring for pollutant concentrations, and for the pathogen density requirements in WAC 173-308-170 (2)(c)(ii) and (iii). The frequency of monitoring must not be less than once per year when biosolids are applied to the land.

(3)

MINIMUM FREQUENCY OF MONITORING

Metric tons (U.S. tons) per 365-day period	Frequency
Greater than zero but less than 290 (320)	once per year
Equal to or greater than 290 (320) but less than 1,500 (1,653)	once per quarter (four times per year)
Equal to or greater than 1,500 (1,653) but less than 15,000 (16,535)	once per 60 days (six times per year)
Equal to or greater than 15,000 (16,535)	once per month (12 times per year)

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-150, filed 2/18/98, effective 3/21/98.]

WAC 173-308-160 Biosolids pollutant limits. This section sets pollutant concentration limits, and annual and cumulative pollutant loading rate limits for biosolids that are applied to the land.

(1) Table 1 of this section sets the maximum allowable concentration (ceiling limit) of pollutants in biosolids that are applied to the land.

Municipal sewage sludge that contains any pollutant listed in Table 1 of this section at a concentration greater than the allowable ceiling limit is not biosolids, is a solid waste, and may not be applied to the land.

(2) Table 2 of this section sets the maximum quantities of pollutants that may be added to an area of land, also referred to as the cumulative pollutant loading rate. The cumulative pollutant loading rates in Table 2 apply when the concentration of any pollutant in biosolids that are applied to the land exceeds the allowable pollutant concentration limit in Table 3 of this section.

(a) A person may not apply bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of this section to a land application site, if any of those rates have been reached on the site.

(b) Before bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of this section are applied to the land, the person who proposes to apply the bulk biosolids must contact the local health department and the department to determine whether bulk biosolids subject to the cumulative pollutant loading rates were applied to the site before the effective date of this chapter.

(i) If bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of this section have been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site since that date is known, in addition to any amount subtracted in (b)(iii) of this subsection, the amount previously applied must be subtracted from the cumulative pollutant loading rate for each pollutant, to determine the remaining amount of pollutant that may be applied to the site.

(ii) If bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of this section have been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk biosolids since

that date is not known, additional biosolids subject to the cumulative pollutant loading rates in Table 2 of this section may not be applied to the site.

(iii) If bulk biosolids were applied to the site prior to July 20, 1993, and the cumulative amount of each pollutant applied to the site prior to that date can be determined, in addition to any amount subtracted in (b)(i) of this subsection, the amount applied must be subtracted from the cumulative pollutant loading rate for each pollutant, to determine the remaining amount of pollutant that may be applied to the site.

(iv) If bulk biosolids subject to the cumulative pollutant loading rates in Table 2 of this section have not been applied to the site, the cumulative amount of each pollutant listed in Table 2 of this section may be applied to the site.

(v) Any person who applies bulk biosolids to the land, which are subject to the cumulative pollutant loading rates in Table 2 of this section, must provide written notice prior to the initial application of bulk biosolids to the land. Notice must be submitted to the department, and to any local health department in whose jurisdiction the biosolids will be applied. The department and the local health department must retain and provide access to the notice. The notice must include:

(A) The location, by street address if applicable, a copy of the assessor's plat map(s) with the application area(s) clearly shown or the latitude and longitude of the approximate center of each land application site, and the section, township and range of each quarter section on which biosolids are applied; and

(B) The name, address, telephone number, and National Pollutant Discharge Elimination System or state waste discharge permit number and state biosolids permit number (if applicable) of the person who prepared the biosolids and also of the person who applies (if applicable) the bulk biosolids.

(3) Table 3 of this section sets a lower pollutant concentration threshold which, when achieved, relieves the person who prepares biosolids and the person who applies biosolids, from certain requirements related to recordkeeping, reporting, and labeling.

(4) Table 4 of this section sets annual pollutant loading rates used to derive an annual whole biosolids application rate. Table 4 is applicable only when biosolids that are sold or given away in a bag or other container for application to the land exceed any of the pollutant concentration limits in Table 3 of this section. The person who prepares the biosolids must provide information on compliance with this requirement on a label or information sheet as required under WAC 173-308-260 (1)(b)(ii) and (4)(b).

TABLE 1 - CEILING CONCENTRATION LIMITS

POLLUTANT	CEILING CONCENTRATION*
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420

POLLUTANT	CEILING CONCENTRATION*
Selenium	100
Zinc	7500

* Milligrams per kilogram - dry weight basis

TABLE 2 - CUMULATIVE POLLUTANT LOADING RATES

POLLUTANT	CUMULATIVE POLLUTANT LOADING RATE*
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

* Kilograms per hectare - dry weight basis

TABLE 3 - POLLUTANT CONCENTRATION LIMITS

POLLUTANT	LIMIT*
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

* Monthly average concentration in milligrams per kilogram - dry weight basis

TABLE 4 - ANNUAL POLLUTANT LOADING RATES

POLLUTANT	ANNUAL POLLUTANT LOADING RATE*
Arsenic	2.0
Cadmium	1.9
Copper	75
Lead	15
Mercury	0.85
Nickel	21
Selenium	5.0
Zinc	140

* Kilograms per hectare per 365 day period

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-160, filed 2/18/98, effective 3/21/98.]

(2/18/98)

WAC 173-308-170 Pathogen reduction. (1) This section contains the requirements for biosolids to be classified either Class A or Class B with respect to pathogens.

(a) The requirements in subsection (2)(a)(i) and (ii), or (b)(i) and (ii), or (c)(i), (ii), and (iii), or (d)(i), (ii) and (iii), or (e)(i) and (ii), or (f)(i) and (ii) of this section must be met for biosolids to be Class A for pathogens.

(b) The Class A pathogen requirements must be met at the same time or before the vector attraction reduction requirements in WAC 173-308-180 (2), (3), or (4).

(c) The requirements in subsection (3)(a), (b), or (c) of this section must be met for biosolids to be Class B for pathogens.

(2) Biosolids - Class A.

(a) Class A - Alternative 1.

(i) The density of fecal coliform in the biosolids must be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the biosolids must be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids are prepared to meet the requirements for exemption in WAC 173-308-200; and

(ii) The time and temperature requirements in (a)(ii)(A), (B), (C), or (D) of this subsection must be met.

(A) When the percent solids of the biosolids is seven percent or higher, the temperature of the biosolids must be 50°C or higher; the time period must be twenty minutes or longer; and the temperature and time period must be determined using equation (1), except when small particles of biosolids are heated by either warmed gases or an immiscible liquid;

$$D = \frac{131,700,000}{10^{0.1400t}} \quad \text{Equation (1)}$$

Where,

D = time in days.

t = temperature in degrees Celsius.

(B) When the percent solids of the biosolids is seven percent or higher and small particles of biosolids are heated by either warmed gases or an immiscible liquid, the temperature of the biosolids must be 50° C or higher; the time period must be fifteen seconds or longer; and the temperature and time period must be determined using equation (1);

(C) When the percent solids of the biosolids is less than seven percent and the time period is at least fifteen seconds, but less than thirty minutes, the temperature and time period must be determined using equation (1);

(D) When the percent solids of the biosolids is less than seven percent; the temperature of the biosolids is 50°C or higher; and the time period is thirty minutes or longer, the temperature and time period must be determined using equation (2).

$$D = \frac{50,070,000}{10^{(0.1400t)}} \quad \text{Equation (2)}$$

Where,

D = time in days.

t = temperature in degrees Celsius.

(b) Class A - Alternative 2.

(i) The density of fecal coliform in the biosolids must be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the biosolids must be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200; and

(ii) The pH of the biosolids that are used must be raised to above twelve and remain above twelve for seventy-two hours; and

(A) The temperature of the biosolids must be above 52°C for twelve hours or longer during the period that the pH of the biosolids is above twelve; and

(B) At the end of the seventy-two-hour period during which the pH of the biosolids is above twelve, the biosolids must be air dried to achieve a percent solids in the biosolids greater than fifty percent.

(c) Class A - Alternative 3.

(i) The density of fecal coliform in the biosolids must be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in biosolids must be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200; and

(ii) The biosolids must be analyzed prior to pathogen treatment to determine whether the biosolids contain enteric viruses; and

(A) When the density of enteric viruses in the biosolids prior to pathogen treatment is less than one plaque-forming unit per four grams of total solids (dry weight basis), the biosolids are Class A with respect to enteric viruses until the next monitoring episode for the biosolids; or

(B) When the density of enteric viruses in the biosolids prior to pathogen treatment is equal to or greater than one plaque-forming unit per four grams of total solids (dry weight basis), the biosolids are Class A with respect to enteric viruses when the density of enteric viruses in the biosolids after pathogen treatment is less than one plaque-forming unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the biosolids that meets the enteric virus density requirement are documented.

(C) After the enteric virus reduction in (c)(ii)(B) of this subsection is demonstrated for the pathogen treatment process, the biosolids continue to be Class A with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented.

(iii) The biosolids must be analyzed prior to pathogen treatment to determine whether the biosolids contains viable helminth ova; and

(A) When the density of viable helminth ova in the biosolids prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the biosolids are Class A with respect to viable helminth ova until the next monitoring episode for the biosolids; or

(B) When the density of viable helminth ova in the biosolids prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the biosolids are Class A with respect to viable helminth ova when the density of viable helminth ova in the biosolids after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the biosolids that meets the viable helminth ova density requirement are documented.

(C) After the viable helminth ova reduction in (c)(iii)(B) of this subsection is demonstrated for the pathogen treatment process, the biosolids continues to be Class A with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented.

(d) Class A - Alternative 4.

(i) The density of fecal coliform in the biosolids must be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the biosolids must be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200; and

(ii) The density of enteric viruses in the biosolids must be less than one plaque-forming unit per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200, unless otherwise specified by the department; and

(iii) The density of viable helminth ova in the biosolids must be less than one per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200, unless otherwise specified by the department.

(e) Class A - Alternative 5.

(i) The density of fecal coliform in the biosolids must be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the biosolids must be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material

derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200; and

(ii) The biosolids must be treated in one of the processes to further reduce pathogens described in (e)(ii)(A) through (G) of this subsection.

(A) Composting.

(I) Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the biosolids must be maintained at 55°C or higher for three days.

(II) Using the windrow composting method, the temperature of the biosolids must be maintained at 55°C or higher for fifteen days or longer. During the period when the compost is maintained at 55°C or higher, there must be a minimum of five turnings of the windrow.

(B) Heat drying. Biosolids must be dried by direct or indirect contact with hot gases to reduce the moisture content of the biosolids to ten percent or less. Either the temperature of the biosolids particles must exceed 80°C or the wet bulb temperature of the gas in contact with the biosolids as the biosolids leaves the dryer must exceed 80°C.

(C) Heat treatment. Liquid biosolids must be heated to a temperature of 180°C or higher for thirty minutes.

(D) Thermophilic aerobic digestion. Liquid biosolids must be agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the biosolids must be at least ten days at 55 to 60°C.

(E) Beta ray irradiation. Biosolids must be irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20°C).

(F) Gamma ray irradiation. Biosolids must be irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature (ca. 20°C).

(G) Pasteurization. The temperature of the biosolids must be maintained at 70°C or higher for thirty minutes or longer.

(f) Class A - Alternative 6.

(i) The density of fecal coliform in the biosolids must be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the biosolids must be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the biosolids are used; at the time the biosolids are prepared for sale or give away in a bag or other container for application to the land; or at the time the biosolids or material derived from biosolids is prepared to meet the requirements for exemption in WAC 173-308-200; and

(ii) The biosolids must be treated in a process that is equivalent to a process to further reduce pathogens. Pathogen equivalency for biosolids applied to land under jurisdiction of the state of Washington will be determined by the department or by the EPA with the approval and concurrence of the department.

(3) **Biosolids - Class B.**

(a) Class B - Alternative 1.

(i) Seven samples of the biosolids must be collected at the time the biosolids are used; and

(ii) The geometric mean of the density of fecal coliform of the samples must be less than 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(b) Class B - Alternative 2. The biosolids must be treated in one of the processes to significantly reduce pathogens described in (b)(i) through (v) of this subsection.

(i) Aerobic digestion. The biosolids must be agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature must be between forty days at 20°C and sixty days at 15°C.

(ii) Air drying. The biosolids must be dried on sand beds or on paved or unpaved basins. The biosolids must dry for a minimum of three months. During two of the three months, the ambient average daily temperature must be above 0°C.

(iii) Anaerobic digestion. The biosolids must be treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature must be between fifteen days at 35 to 55°C and sixty days at 20°C.

(iv) Composting. Using the within-vessel, static aerated pile, or windrow composting methods, the temperature of the biosolids must be raised to 40°C or higher and remain at 40°C or higher for five days. For four hours during the five days, the temperature in the compost pile must exceed 55°C.

(v) Lime stabilization. Sufficient lime must be added to the biosolids to raise the pH of the biosolids to twelve after two hours of contact.

(c) Class B - Alternative 3. The biosolids must be treated in a process that is equivalent to a process to significantly reduce pathogens. Pathogen equivalency for biosolids applied to land under jurisdiction of the state of Washington will be determined by the department or by the EPA with the approval and concurrence of the department.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-170, filed 2/18/98, effective 3/21/98.]

WAC 173-308-180 Vector attraction reduction. (1)

When vector attraction reduction is accomplished prior to application of biosolids to the land, the requirements in one of subsections (2) through (7) of this section must be met.

The vector attraction reduction requirements in subsection (2), (3), or (4) of this section must be met at the same time or after the Class A pathogen requirements in WAC 173-308-170.

(2) The mass of volatile solids in the biosolids must be reduced by a minimum of thirty-eight percent (see calculation procedures in *"Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge,"* EPA-625/R-92/013, 1992, U.S.EPA, Cincinnati, OH 45268.)

(a) When the thirty-eight percent volatile solids reduction requirement in this subsection (2) cannot be met for anaerobically digested biosolids, vector attraction reduction can be demonstrated by digesting a portion of the previously digested biosolids anaerobically in the laboratory in a bench-scale unit for forty additional days at a temperature between

30 and 37°C. After the forty-day period, the vector attraction reduction requirement is met if the volatile solids in the biosolids at the beginning of that period are reduced by less than seventeen percent.

(b) When the thirty-eight percent volatile solids reduction requirement in this subsection (2) cannot be met for aerobically digested biosolids, vector attraction reduction can be demonstrated by digesting a portion of the previously digested biosolids that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for thirty additional days at 20°C. After the thirty-day period, the vector attraction reduction requirement is met if the volatile solids in the biosolids at the beginning of that period are reduced by less than fifteen percent.

(3) The specific oxygen uptake rate (SOUR) for biosolids treated in an aerobic process must be less than or equal to 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20°C.

(4) The biosolids must be treated in an aerobic process for fourteen days or longer. During that time, the temperature of the biosolids must be higher than 40°C and the average temperature of the biosolids must be higher than 45°C.

(5) The pH of the biosolids must be raised to twelve or higher by alkali addition and, without the addition of more alkali, must remain at twelve or higher for two hours and then at 11.5 or higher for an additional twenty-two hours.

(6) For biosolids that do not contain unstabilized solids generated in a primary wastewater treatment process, the percent solids must be equal to or greater than seventy-five percent based on the moisture content and total solids prior to mixing with other materials.

(7) For biosolids that contain unstabilized solids generated in a primary wastewater treatment process, the percent solids must be equal to or greater than ninety percent based on the moisture content and total solids prior to mixing with other materials.

[Statutory Authority: RCW 70.95J.020 and 70.95.255, 98-05-101 (Order 97-30), § 173-308-180, filed 2/18/98, effective 3/21/98.]

WAC 173-308-190 Protecting waters of the state—Agronomic rate requirement. In accordance with water quality standards for ground waters of the state of Washington, chapter 173-200 WAC, biosolids must be applied to the land in a manner approved by the department, and at not greater than agronomic rates unless otherwise specified by the department in accordance with subsection (1) or (2) of this section. Agronomic rate determinations must take into account nitrogen supplied from other sources such as manures and commercial fertilizers as well as biosolids.

(1) Biosolids applied to land reclamation sites may be applied in excess of agronomic rates if approved by the department in a site specific land application plan developed under WAC 173-308-310(6).

(2) For the purposes of furthering necessary research efforts, biosolids may be applied at greater than agronomic rates to limited areas of land if approved by the department in a site specific land application plan developed under WAC 173-308-310(6). In addition to the elements required under

WAC 173-308-310(6), the land application plan for a research project must also include:

(a) A research proposal describing the nature of the project, what may be learned, the anticipated benefits, provisions for progress reports and peer review, and interpretation of results;

(b) An explanation for the sizing of the research plot(s). Plot size must not exceed the minimum area required to support the goals of the research; and

(c) A discussion of any potential adverse impacts of application rates in excess of agronomic rates, along with potential mitigation or response to adverse effects if observed.

(3) The person who prepares exceptional quality biosolids that are sold or given away to another person must provide sufficient information to allow the person who receives the biosolids to determine an agronomic rate of application.

(4) The person who applies exceptional quality biosolids to the land is responsible for compliance with the agronomic rate requirement in this section.

(5) When the potential for ground water contamination due to biosolids application exists, the department may require ground water monitoring or other conditions in accordance with WAC 173-200-080. If it is determined that an enforcement criterion may be violated, an evaluation must be conducted to demonstrate compliance with the provisions of WAC 173-200-050 (3)(b)(vi).

[Statutory Authority: RCW 70.95J.020 and 70.95.255, 98-05-101 (Order 97-30), § 173-308-190, filed 2/18/98, effective 3/21/98.]

WAC 173-308-200 Exemptions based on the exceptional quality of biosolids. (1) The person who prepares and the person who applies biosolids that meet criteria to be classified as exceptional quality are exempt from the following requirements:

(a) The site management and access restrictions in WAC 173-308-210(4), 173-308-220(4), 173-308-230(4), and 173-308-240(4);

(b) The labeling requirement derived from Table 4 of WAC 173-308-160 for the annual whole biosolids application rate in WAC 173-308-260 (1)(b)(ii);

(c) The requirement in WAC 173-308-120(6) for obtaining prior written approval of the landowner;

(d) The land application plan requirements of WAC 173-308-310(6), except as provided in WAC 173-308-310 (6)(a)(ii) or (iii);

(e) The recordkeeping requirements in WAC 173-308-210 (5)(b), 173-308-220 (5)(b), 173-308-230 (5)(b), and 173-308-240 (6)(b);

(f) The requirements in WAC 173-308-300 (2)(a) and (b) for approved plans when used as a component of intermediate or final cover in a municipal solid waste landfill.

(2) On a case-by-case basis, the director may apply any or all of the site management and access restrictions exempted under WAC 173-308-200 (1)(a) after determining that the requirements are necessary to protect public health and the environment from any adverse effect that may occur from a pollutant in the bulk biosolids.

[Statutory Authority: RCW 70.95J.020 and 70.95.255, 98-05-101 (Order 97-30), § 173-308-200, filed 2/18/98, effective 3/21/98.]

WAC 173-308-210 Bulk biosolids applied to agricultural land. (1) Pollutant concentrations.

(a) The concentration of a pollutant in bulk biosolids that are applied to agricultural land may not exceed the allowable ceiling limit in Table 1 of WAC 173-308-160.

(b) If the concentration of a pollutant in bulk biosolids that are applied to agricultural land exceeds the pollutant concentration limits in Table 3 of WAC 173-308-160, then the total cumulative loading rate for each pollutant may not exceed the limit in Table 2 of WAC 173-308-160, as required in WAC 173-308-160 (1)(b)(i).

(2) **Pathogens.** Bulk biosolids that are applied to agricultural land must be Class A for pathogens, or they must be Class B for pathogens and the site management and access restrictions in subsection (4)(a)(i) through (x) and (b)(i) through (iii) of this section must be met.

(3) Vector attraction reduction.

(a) Bulk biosolids that are applied to agricultural land must meet one of the vector attraction reduction requirements in WAC 173-308-180 (2) through (7) before they are applied to the land; or the requirements of (b)(i) or (ii) of this subsection must be met.

(b)(i) The biosolids must be injected below the surface of the land; and

(A) No significant amount of the biosolids may be present on the land surface within one hour after the biosolids are injected; and

(B) When the biosolids are Class A for pathogens, the biosolids must be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(ii) Biosolids must be incorporated into the soil within six hours after application to the land;

When biosolids that are incorporated into the soil are Class A with respect to pathogens, the biosolids must be applied to the land within eight hours after being discharged from the pathogen treatment process.

(4) Site management and access restrictions.

(a) The site management and access restrictions in (a)(i) through (x) and (b)(i) through (iii) of this subsection are applicable to biosolids that are Class B for pathogens when they are applied to agricultural land.

(i) Food crops, feed crops, and fiber crops must not be harvested for thirty days after application of biosolids.

(ii) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface must not be harvested for fourteen months after application of biosolids.

(iii) Food crops with harvested parts below the surface of the land must not be harvested for twenty months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.

(iv) Food crops with harvested parts below the surface of the land must not be harvested for thirty-eight months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.

(v) Livestock must not be allowed to graze on the land for thirty days after application of biosolids.

(vi) Turf grown on land where biosolids are applied must not be harvested for one year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the department.

(vii) Public access to land with a high potential for public exposure must be restricted for one year after application of biosolids.

(viii) Public access to land with a low potential for public exposure must be restricted for thirty days after application of biosolids.

(ix) Unless otherwise approved in a site specific land application plan under WAC 173-308-310 (6)(b), during the time when access is restricted, signs must be posted around the application site at all significant points of access, and otherwise around the perimeter so that they can be noticed and read by a reasonably observant person. The required content of signs is listed in WAC 173-308-275.

It is a violation of these rules for any person to remove a sign posted in accordance with the requirements of (a)(ix) of this subsection during the period when access is restricted.

(x) Biosolids must not be applied to the land within one hundred feet of a well unless otherwise approved in a permit issued in accordance with the requirements of this chapter.

(b) The site management restrictions in (b)(i) through (iii) of this subsection are applicable to biosolids that do not meet standards to be classified as exceptional quality when they are applied to agricultural land.

(i) Bulk biosolids may not be applied to land that is ten meters or less from surface waters of the state, unless otherwise specified by the department.

(ii) Bulk biosolids may not be applied to the land so that they enter a wetland or waters of the state, unless approved in a permit issued by the department or by EPA with the approval of the department.

(iii) Bulk biosolids may not be applied to the land if they are likely to adversely affect a threatened or endangered species listed under WAC 232-12-011 or 232-12-014 or its critical habitat.

(5) Recordkeeping.

(a) The person who prepares biosolids for application to agricultural land must keep the records required in WAC 173-308-290 (2) and (3).

(b) The person who applies biosolids that do not meet criteria to be classified as exceptional quality to agricultural land must keep the records required in WAC 173-308-290(4).

(6) Reporting. The person who prepares biosolids for application to agricultural land must submit an annual report in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-210, filed 2/18/98, effective 3/21/98.]

WAC 173-308-220 Bulk biosolids applied to forestland. (1) Pollutant concentrations.

(a) The concentration of a pollutant in bulk biosolids that are applied to forestland may not exceed the allowable ceiling limit in Table 1 of WAC 173-308-160.

(b) If the concentration of a pollutant in bulk biosolids that are applied to forestland exceeds the pollutant concentration limits in Table 3 of WAC 173-308-160, then the total

cumulative loading rate for each pollutant may not exceed the limit in Table 2 of WAC 173-308-160, as required in WAC 173-308-160 (1)(b)(i).

(2) **Pathogens.** Bulk biosolids that are applied to forestland must be Class A for pathogens, or they must be Class B for pathogens and the site management and access restrictions in subsection (4)(a)(i) through (ix) and (b)(i) through (iii) of this section must be met.

(3) **Vector attraction reduction.**

(a) Bulk biosolids that are applied to forestland must meet one of the vector attraction reduction requirements in WAC 173-308-180 (2) through (7) before they are applied to the land; or the requirements of (b)(i) or (ii) of this subsection must be met.

(b)(i) The biosolids must be injected below the surface of the land; and

(A) No significant amount of the biosolids may be present on the land surface within one hour after the biosolids are injected; and

(B) When the biosolids are Class A for pathogens, the biosolids must be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(ii) Biosolids must be incorporated into the soil within six hours after application to the land.

When biosolids that are incorporated into the soil are Class A with respect to pathogens, the biosolids must be applied to the land within eight hours after being discharged from the pathogen treatment process.

(4) **Site management and access restrictions.**

(a) The site management and access restrictions in (a)(i) through (ix) and (b)(i) through (iii) of this subsection are applicable to biosolids that are Class B for pathogens when they are applied to forestland.

(i) Food crops, feed crops, and fiber crops must not be harvested for thirty days after application of biosolids.

(ii) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface must not be harvested for fourteen months after application of biosolids.

(iii) Food crops with harvested parts below the surface of the land must not be harvested for twenty months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.

(iv) Food crops with harvested parts below the surface of the land must not be harvested for thirty-eight months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.

(v) Livestock must not be allowed to graze on the land for thirty days after application of biosolids.

(vi) Public access to land with a high potential for public exposure must be restricted for one year after application of biosolids.

(vii) Public access to land with a low potential for public exposure must be restricted for thirty days after application of biosolids.

(viii) Unless otherwise approved in a site specific land application plan under WAC 173-308-310 (6)(b), during the

time when access is restricted, signs must be posted around the application site at all significant points of access, and otherwise around the perimeter so that they can be noticed and read by a reasonably observant person. The required content of signs is listed in WAC 173-308-275.

It is a violation of these rules for any person to remove a sign posted in accordance with the requirements of (a)(viii) of this subsection during the period when access is restricted.

(ix) Biosolids must not be applied to the land within one hundred feet of a well unless otherwise approved in a permit issued in accordance with the requirements of this chapter.

(b) The site management restrictions in (b)(i) through (iii) of this subsection are applicable to biosolids that do not meet standards to be classified as exceptional quality when they are applied to forestland.

(i) Bulk biosolids may not be applied to land that is ten meters or less from surface waters of the state, unless otherwise specified by the department.

(ii) Bulk biosolids may not be applied to the land so that they enter a wetland or waters of the state, unless approved in a permit issued by the department, or by EPA with the approval of the department.

(iii) Bulk biosolids may not be applied to the land if they are likely to adversely affect a threatened or endangered species listed under WAC 232-12-011 or 232-12-014 or its critical habitat.

(5) **Recordkeeping.**

(a) The person who prepares biosolids for application to forestland must keep the records required in WAC 173-308-290 (2) and (3).

(b) The person who applies biosolids that do not meet criteria to be classified as exceptional quality to forestland must keep the records required in WAC 173-308-290(4).

(6) **Reporting.** The person who prepares biosolids for application to forestland must submit an annual report in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-220, filed 2/18/98, effective 3/21/98.]

WAC 173-308-230 Bulk biosolids applied to a public contact site. (1) Pollutant concentrations.

(a) The concentration of a pollutant in bulk biosolids that are applied to a public contact site may not exceed the ceiling limit in Table 1 of WAC 173-308-160.

(b) If the concentration of a pollutant in bulk biosolids that are applied to a public contact site exceeds the pollutant concentration limits in Table 3 of WAC 173-308-160, then the total cumulative loading rate for each pollutant may not exceed the limit in Table 2 of WAC 173-308-160, as required in WAC 173-308-160 (1)(b)(i).

(2) **Pathogens.** Bulk biosolids that are applied to a public contact site must be Class A for pathogens, or they must be Class B for pathogens and the site management and access restrictions in WAC 173-308-230 (4)(a)(i) through (ix) and (b)(i) through (iii) must be met.

(3) **Vector attraction reduction.**

(a) Bulk biosolids that are applied to a public contact site must meet one of the vector attraction reduction requirements in WAC 173-308-180 (2) through (7) before they are applied

to the land; or the requirements of (b)(i) or (ii) of this subsection must be met.

(b)(i) The biosolids must be injected below the surface of the land; and

(A) No significant amount of the biosolids may be present on the land surface within one hour after the biosolids are injected; and

(B) When the biosolids are Class A for pathogens, the biosolids must be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(ii) Biosolids must be incorporated into the soil within six hours after application to the land.

When biosolids that are incorporated into the soil are Class A with respect to pathogens, the biosolids must be applied to the land within eight hours after being discharged from the pathogen treatment process.

(4) Site management and access restrictions.

(a) The site management and access restrictions in (a)(i) through (ix) and (b)(i) through (iii) of this subsection are applicable to biosolids that are Class B for pathogens when they are applied to a public contact site.

(i) Food crops, feed crops, and fiber crops must not be harvested for thirty days after application of biosolids.

(ii) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface must not be harvested for fourteen months after application of biosolids.

(iii) Food crops with harvested parts below the surface of the land must not be harvested for twenty months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.

(iv) Food crops with harvested parts below the surface of the land must not be harvested for thirty-eight months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.

(v) Livestock must not be allowed to graze on the land for thirty days after application of biosolids.

(vi) Turf grown on land where biosolids are applied must not be harvested for one year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the department.

(vii) Public access must be restricted for one year after application of biosolids.

(viii) Unless otherwise approved in a site specific land application plan under WAC 173-308-310 (6)(b), during the time when access is restricted, signs must be posted around the application site at all significant points of access, and otherwise around the perimeter so that they can be noticed and read by a reasonably observant person. The required content of signs is listed in WAC 173-308-275.

It is a violation of these rules for any person to remove a sign posted in accordance with the requirements of (a)(viii) of this subsection during the period when access is restricted.

(ix) Biosolids must not be applied to the land within one hundred feet of a well unless otherwise approved in a permit issued in accordance with the requirements of this chapter.

(b) The site management restrictions in (b)(i) through (iii) of this subsection are applicable to biosolids that do not meet standards to be classified as exceptional quality when they are applied to a public contact site.

(i) Bulk biosolids may not be applied to land that is ten meters or less from surface waters of the state, unless otherwise specified by the department.

(ii) Bulk biosolids may not be applied to the land so that they enter a wetland or waters of the state, unless approved in a permit issued by the department, or by EPA with the approval of the department.

(iii) Bulk biosolids may not be applied to the land if they are likely to adversely affect a threatened or endangered species listed under WAC 232-12-011 or 232-12-014 or its critical habitat.

(5) Recordkeeping.

(a) The person who prepares bulk biosolids for application to a public contact site must keep the records required in WAC 173-308-290 (2) and (3).

(b) The person who applies bulk biosolids that do not meet criteria to be classified as exceptional quality to a public contact site must keep the records required in WAC 173-308-290(4).

(6) **Reporting.** The person who prepares bulk biosolids for application to a public contact site must submit an annual report in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-230, filed 2/18/98, effective 3/21/98.]

WAC 173-308-240 Bulk biosolids applied to a land reclamation site. (1) Pollutant concentrations.

(a) The concentration of a pollutant in bulk biosolids that are applied to a land reclamation site may not exceed the allowable ceiling limit in Table 1 of WAC 173-308-160.

(b) If the concentration of a pollutant in bulk biosolids that are applied to a land reclamation site exceeds the pollutant concentration limits in Table 3 of WAC 173-308-160, then the total cumulative loading rate for each pollutant may not exceed the limit in Table 2 of WAC 173-308-160, as required in WAC 173-308-160 (1)(b)(i).

(2) **Pathogens.** Bulk biosolids that are applied to a land reclamation site must be Class A for pathogens, or the bulk biosolids must be Class B for pathogens and the site management and access restrictions in subsection (4)(a)(i) through (x) and (b)(i) through (iii) of this section must be met.

(3) Vector attraction reduction.

(a) Bulk biosolids that are applied to a land reclamation site must meet one of the vector attraction reduction requirements in WAC 173-308-180 (2) through (7) before they are applied to the land; or the requirements of (b)(i) or (ii) of this subsection must be met.

(b)(i) The biosolids must be injected below the surface of the land; and

(A) No significant amount of the biosolids may be present on the land surface within one hour after the biosolids are injected; and

(B) When the biosolids are Class A for pathogens, the biosolids must be injected below the land surface within eight

hours after being discharged from the pathogen treatment process.

(ii) Biosolids must be incorporated into the soil within six hours after application to the land.

When biosolids that are incorporated into the soil are Class A with respect to pathogens, the biosolids must be applied to the land within eight hours after being discharged from the pathogen treatment process.

(4) Site management and access restrictions.

(a) The site management and access restrictions in (a)(i) through (x) and (b)(i) through (iii) of this subsection are applicable to biosolids that are Class B for pathogens when they are applied to a land reclamation site.

(i) Food crops, feed crops, and fiber crops must not be harvested for thirty days after application of biosolids.

(ii) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface must not be harvested for fourteen months after application of biosolids.

(iii) Food crops with harvested parts below the surface of the land must not be harvested for twenty months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.

(iv) Food crops with harvested parts below the surface of the land must not be harvested for thirty-eight months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.

(v) Livestock must not be allowed to graze on the land for thirty days after application of biosolids.

(vi) Turf grown on land where biosolids are applied must not be harvested for one year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the department.

(vii) Public access to land with a high potential for public exposure must be restricted for one year after application of biosolids.

(viii) Public access to land with a low potential for public exposure must be restricted for thirty days after application of biosolids.

(ix) Unless otherwise approved in a site specific land application plan under WAC 173-308-310 (6)(b), during the time when access is restricted, signs must be posted around the application site at all significant points of access, and otherwise around the perimeter so that they can be noticed and read by a reasonably observant person. The required content of signs is listed in WAC 173-308-275.

It is a violation of these rules for any person to remove a sign posted in accordance with the requirements of (a)(ix) of this subsection during the period when access is restricted.

(x) Biosolids must not be applied to the land within one hundred feet of a well unless otherwise approved in a permit issued in accordance with the requirements of this chapter.

(b) The site management restrictions in (b)(i) through (iii) of this subsection are applicable to biosolids that do not meet standards to be classified as exceptional quality when they are applied to a land reclamation site.

(i) Bulk biosolids may not be applied to land that is ten meters or less from surface waters of the state, unless otherwise specified by the department;

(ii) Bulk biosolids may not be applied to the land so that they enter a wetland or waters of the state, unless approved in a permit issued by the department, or by EPA with the approval of the department;

(iii) Bulk biosolids may not be applied to the land if they are likely to adversely affect a threatened or endangered species listed under WAC 232-12-011 or 232-12-014 or its critical habitat.

(5) Application exceeding agronomic rates. In accordance with WAC 173-308-190 (1) and (5), when biosolids will be applied to a land reclamation site in excess of agronomic rates, the application rate must be approved in a site specific land application plan by the department. The department may require that an evaluation be conducted as specified in WAC 173-200-080. Where it is determined that an enforcement criterion may be violated, the evaluation must be conducted to demonstrate compliance with the provisions of WAC 173-200-050 (3)(b)(vi).

(6) Recordkeeping.

(a) The person who prepares biosolids for application to a land reclamation site must keep the records required in WAC 173-308-290 (2) and (3).

(b) The person who applies biosolids that do not meet criteria to be classified as exceptional quality to a land reclamation site must keep the records required in WAC 173-308-290(4).

(7) Reporting.

The person who prepares biosolids for application to a land reclamation site must submit an annual report in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-240, filed 2/18/98, effective 3/21/98.]

WAC 173-308-250 Bulk biosolids applied to a lawn or home garden. (1) Bulk biosolids that are applied to a lawn or home garden must meet the criteria to be classified as exceptional quality as defined in WAC 173-308-080.

(2) **Recordkeeping.** The person who prepares bulk biosolids for application to a lawn or home garden must keep the records required in WAC 173-308-290 (2) and (3).

(3) **Reporting.** The person who prepares bulk biosolids for application to a lawn or home garden must submit annual reports in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-250, filed 2/18/98, effective 3/21/98.]

WAC 173-308-260 Biosolids sold or given away in a bag or other container. (1) **Pollutant concentrations.**

(a) The concentration of a pollutant in biosolids that are sold or given away in a bag or other container may not exceed the allowable ceiling limit in Table 1 of WAC 173-308-160.

(b) If biosolids that are sold or given away in a bag or other container exceed the pollutant concentration limits in Table 3 of WAC 173-308-160, then:

(i) The mathematical product of the concentration of each pollutant in the biosolids and the annual whole biosolids

application rate for the biosolids must not cause the annual pollutant loading rate for the pollutant in Table 4 of WAC 173-308-160 to be exceeded;

The procedure for determining the annual whole biosolids application rate that complies with the requirement in (b)(i) of this subsection is specified in Appendix A of this chapter.

(ii) The annual whole biosolids application rate as calculated in (b)(i) of this subsection, or the recommended agronomic rate, whichever is less, must be included on the label or information sheet required in WAC 173-308-260(4).

(2) **Pathogens.** Biosolids that are sold or given away in a bag or other container must be Class A for pathogens.

(3) **Vector attraction.** One of the vector attraction reduction requirements in WAC 173-308-180 (2) through (7) must be met when biosolids are sold or given away in a bag or other container for application to the land.

(4) **Label or information sheet required.** Any person who prepares biosolids that are sold or given away in a bag or other container in the state of Washington, must comply with the requirements of (a)(i) through (vi) of this subsection when the biosolids product is prepared or derived from biosolids that do not meet exceptional quality standards.

(a) A label must be affixed to the bag or other container in which biosolids are sold or given away, or an information sheet must be provided to the person who receives biosolids that are sold or given away in a bag or other container. The label or information sheet must contain the following information:

(i) The name, address, and phone number of the person who prepared the biosolids.

(ii) A statement or information indicating that the product complies with applicable regulations for biosolids or that the product has been prepared to meet standards that make it safe for its intended use when used in accordance with the directions provided by the manufacturer.

(iii) A statement or information that encourages proper use of the product and protection of public health and the environment. This may include information on agronomic rates, product storage, hygiene, and protection of surface or ground water resources.

(iv) Agronomic rates for typical applications or guidance on how to determine the agronomic rate of application.

(v) A statement or information indicating that the product contains or is derived from biosolids.

(vi) Any additional information needed to facilitate safe use of the product.

(b) In addition to the information required in (a)(i) through (vi) of this subsection, the information in subsection (1)(b)(ii) of this section when the pollutant limits in Table 3 of WAC 173-308-160 are exceeded.

(c) Any person who prepares biosolids that are sold or distributed outside the jurisdiction of the state of Washington, must comply with the requirements in 40 CFR Part 503.14(e), as applicable.

(5) **Recordkeeping.** The person who prepares biosolids for sale or give away in a bag or other container must keep the records required in WAC 173-308-290 (2) and (5).

(6) **Reporting.** The person who prepares biosolids for sale or give away in a bag or other container must submit

annual reports in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-260, filed 2/18/98, effective 3/21/98.]

WAC 173-308-270 Domestic septage management requirements. (1) Domestic septage may not be applied to a public contact site, a lawn, or a home garden, unless it is managed as biosolids originating from municipal sewage sludge according to this subsection (1).

When domestic septage managed as biosolids originating from municipal sewage is applied to the land, unless otherwise provided, all applicable requirements for biosolids must be met, including but not limited to requirements for pathogen and vector attraction reduction, site management and access restrictions, pollutant concentration limits, agronomic rates, obtaining and providing information, sampling and analysis, and recordkeeping and reporting.

(2) Domestic septage that is applied to the land must be treated by a process such as physical screening or grinding, or another approved method must be employed to significantly remove or reduce recognizable materials when septage is applied to the land.

(3) **Pathogens.**

(a) When domestic septage - class II is applied to the land, the alkaline stabilization requirement of (b) of this subsection must be met, or the Class B pathogen requirements in one of WAC 173-308-170 (3)(a) through (c) and the site management and access restrictions in subsection (5)(a)(i) through (ix) and (b)(i) through (iv) of this section must be met.

(b) When domestic septage - class I or III is applied to the land, the pH of the septage must be raised to twelve or higher by alkali addition and, without the addition of more alkali, must remain at twelve or higher for thirty minutes and the site management and access restrictions in subsection (5)(a)(i) through (ix) of this section must be met, or, when pH adjustment is not used to achieve pathogen reduction requirements, the site management and access restrictions in subsection (5)(a)(i) through (ix) and (b)(i) through (iv) of this section must be met.

(4) **Vector attraction reduction.** The requirements in one of (a), (b), or (c) of this subsection, must be met when domestic septage is applied to the land.

(a) The septage must be injected below the surface of the land;

(i) No significant amount of septage may be present on the land surface within one hour after the septage is injected; and

(ii) When the septage is Class A for pathogens, the septage must be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(b) Septage must be incorporated into the soil within six hours after application to the land;

When septage that is incorporated into the soil is Class A with respect to pathogens, the septage must be applied to the land within eight hours after being discharged from the pathogen treatment process.

(c) The pH of the septage must be raised to twelve or higher by alkali addition and, without the addition of more alkali, must remain at twelve or higher for thirty minutes.

(5) Site management and access restrictions.

(a) The site management and access restrictions in (a)(i) through (ix) of this subsection are applicable when domestic septage is applied to the land.

(i) Food crops, feed crops, and fiber crops must not be harvested for thirty days after the application of septage.

(ii) Food crops with harvested parts that touch the septage/soil mixture and are totally above the land surface must not be harvested for fourteen months after application of septage.

(iii) Food crops with harvested parts below the surface of the land must not be harvested for twenty months after application of septage when the septage remains on the land surface for four months or longer prior to incorporation into the soil.

(iv) Food crops with harvested parts below the surface of the land must not be harvested for thirty-eight months after application of septage when the septage remains on the land surface for less than four months prior to incorporation into the soil.

(v) Unless otherwise approved in a site specific land application plan under WAC 173-308-310 (6)(b), during the time when access is restricted, signs must be posted around the application site at all significant points of access, and otherwise around the perimeter so that they can be noticed and read by a reasonably observant person. The required content of signs is listed in WAC 173-308-275.

It is a violation of these rules for any person to remove a sign posted in accordance with the requirements of subsection (4)(a)(v) of this section during the period when access is restricted.

(vi) Septage must not be applied to land that is one hundred feet or less from surface waters of the state, unless otherwise specified by the department;

(vii) Septage must not be applied to the land so that it enters a wetland or waters of the state, unless approved in a permit issued by the department, or by EPA with the approval of the department;

(viii) Septage must not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under WAC 232-12-011 or 232-12-014 or its critical habitat.

(ix) Septage must not be applied to the land within one hundred feet of a well unless otherwise approved in a permit issued in accordance with the requirements of this chapter.

(b) In addition to the site management and access restrictions in (a)(i) through (ix) of this subsection, the additional site management and access restrictions in (b)(i) through (iv) of this subsection apply to domestic septage if the pH adjustment requirement of subsection (3)(b) of this section is not met when septage is applied to the land.

(i) Livestock must not be allowed to graze on the land for thirty days after application of septage.

(ii) Turf grown on land where septage is applied must not be harvested for one year after application of the septage when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the department.

(iii) Public access to land with a high potential for public exposure must be restricted for one year after the application of septage.

(iv) Public access to land with a low potential for public exposure must be restricted for thirty days after the application of septage.

(6) Except as provided in this subsection (6), septage that is applied to the land must be applied at a rate not exceeding the rate determined by equation (3).

$$\text{AAR} = N / 0.0026 \quad \text{Equation (3)}$$

Where:

AAR = Annual application rate in gallons per acre per three hundred sixty-five-day period.

N = Amount of nitrogen in pounds per acre per 365 day period needed by the crop or vegetation grown on the land.

A person may not apply domestic septage to the land during a three hundred sixty-five-day period if the annual application rate in this subsection (6) has been reached during that period, unless the domestic septage is managed as biosolids originating from municipal sewage sludge per subsection (1) of this section.

(7) Monitoring.

(a) Samples of domestic septage that are collected and analyzed must be representative of the material that is applied to the land.

(b) When domestic septage - class I, II, or III is applied to the land and pH adjustment is used to meet any pathogen or vector attraction reduction requirement, each container of domestic septage that is applied to the land must be monitored to determine compliance with pH requirements.

(8) **Recordkeeping.** The person who prepares septage and the person who applies septage must keep the records required in WAC 173-308-290(6).

(9) **Reporting.** Facilities that prepare septage for application to the land, and persons who apply septage to the land, which is not prepared at a treatment works treating domestic sewage must submit annual reports in accordance with the requirements of WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-270, filed 2/18/98, effective 3/21/98.]

WAC 173-308-275 Contents of signs for land application sites. (1) When signs are required for the purpose of restricting access, they must contain at least the following information:

(a) The name and address or phone number of the generator and if different, the person who applies;

(b) The names, addresses, and phone numbers of the regulatory and permitting authorities;

(c) The material that is being applied (biosolids or a more detailed description);

(d) Notice that access is restricted, and if desired, the date after which access is no longer restricted; and

(e) If applicable, a notice on limitations regarding the harvest of edible plants from the site.

(2) With the consent of the department, "no trespassing" signs may be substituted for the informational signs required under subsection (1) of this section.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-275, filed 2/18/98, effective 3/21/98.]

WAC 173-308-280 Requirements for facilities storing biosolids. (1) Facilities storing biosolids must do so in accordance with the provisions of a permit issued under this chapter, if an applicable permit has been issued.

(2) Biosolids may not be stored in a manner that would be likely to result in the contamination of ground water, surface water, air, or land under current conditions or in the case of fire or flood.

(3) Facilities storing liquid biosolids in surface impoundments must meet the requirements in WAC 173-304-430 and other applicable sections of chapter 173-304 WAC that apply to the design, construction, and operation of surface impoundments.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-280, filed 2/18/98, effective 3/21/98.]

WAC 173-308-290 Recordkeeping. (1)(a) Both the person who prepares biosolids and the person who applies bulk biosolids to the land must keep certain records and certification statements showing that applicable standards for biosolids quality, treatment, and management have been met. Records must also be kept on the amount and type biosolids applied to the land under different management scenarios or that are disposed of in a municipal solid waste landfill.

(b) A responsible official as described in WAC 173-308-310(8) must sign all certification statements required under this section.

(2) The person who prepares biosolids must keep the following records (amounts recorded as dry tons):

(a) The amount of bulk biosolids applied by the preparer or the preparer's agents to agricultural land;

(b) The amount of bulk biosolids applied by the preparer or the preparer's agents to forestland;

(c) The amount of bulk biosolids applied by the preparer or the preparer's agents to a public contact site;

(d) The amount of bulk biosolids applied by the preparer or the preparer's agents to a land reclamation site;

(e) The amount of bulk biosolids applied by the preparer or the preparer's agents to a lawn or home garden;

(f) The amount of biosolids that are sold or given away by the preparer in a bag or other container for application to the land;

(g) The amount of biosolids in a compost or blended biosolids product that is sold or given away by the preparer in bulk form or in a bag or other container for application to the land;

(h) The amount of bulk biosolids that are sold or given away by the preparer to another person who prepares biosolids for application to the land;

(i) The amount of bulk biosolids that are sold or given away by the preparer to a person other than an agent of the preparer for application to the land; and

(2/18/98)

(j) The amount of biosolids that are disposed in a municipal solid waste landfill on an emergency, temporary, or long-term basis.

(3) When bulk biosolids are applied to the land, the person who prepares the biosolids must develop and maintain the following information, as applicable, for five years:

(a) If the pollutant limits in Table 3 of WAC 173-308-160 were met, laboratory analysis data showing that those limits were met; or, if the pollutant ceiling concentrations in Table 1 of WAC 173-308-160 were met, laboratory analysis data showing that those limits were met.

(b) If the Class A pathogen requirements in one of WAC 173-308-170 (2)(a) through (f) were met, process monitoring and/or laboratory analysis data showing that those requirements were met; or, if the Class B pathogen standards in one of WAC 173-308-170 (3)(a), (b), or (c) were met, process monitoring and/or laboratory analysis data showing that those requirements were met, and a description of how those requirements were met.

(c) If the vector attraction reduction requirements in one of WAC 173-308-180 (2) through (7) were met, process monitoring and/or laboratory analysis monitoring data showing that those requirements were met and a description of how those requirements were met.

(d) One of the following certification statements, as applicable:

(i) If the vector attraction reduction requirements in one of WAC 173-308-180 (2) through (7) were met, the following signed certification: "I certify, under penalty of law, that the (insert Class A or Class B as appropriate) pathogen requirements in (insert one of WAC 173-308-170 (2)(a), (b), (c), (d), (e), or (f) if Class A, or insert one of WAC 173-308-170 (3)(a), (b), or (c) if Class B), and the vector attraction reduction requirement in (insert one of the vector attraction reduction requirements in WAC 173-308-180 (2) through (7)) have been met. This determination was made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that pathogen and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(ii) If the vector attraction reduction requirements in one of WAC 173-308-180 (2) through (7) were not met, the following signed certification: "I certify, under penalty of law, that the (insert Class A or Class B as appropriate) pathogen requirements in (insert one of WAC 173-308-170 (2)(a), (b), (c), (d), (e), or (f) if Class A, or insert one of WAC 173-308-170 (3)(a), (b), or (c) if Class B) have been met. This determination was made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that pathogen reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(4) When bulk biosolids are applied to the land, the person who applies the biosolids must develop and maintain the

following information, as applicable, for five years or indefinitely as required in (c) of this subsection:

(a) If the Class B pathogen standards in one of WAC 173-308-170 (3)(a), (b), or (c) were met, a description of how the site management and access restrictions in WAC 173-308-210 (4)(a)(i) through (x), or WAC 173-308-220 (4)(a)(i) through (ix), or WAC 173-308-230 (4)(a)(i) through (ix), or WAC 173-308-240 (4)(a)(i) through (x), as applicable, were met for each site on which biosolids were applied.

The following signed certification: "I certify, under penalty of law, that the site management and access restrictions in (insert WAC 173-308-210 (4)(a)(i) through (x), or WAC 173-308-220 (4)(a)(i) through (ix), or WAC 173-308-230 (4)(a)(i) through (ix), or WAC 173-308-240 (4)(a)(i) through (x), as applicable) have been met for each site on which bulk biosolids were applied. This determination was made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the site management and access restrictions have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(b) If the vector attraction reduction requirements in WAC 173-308-210 (3)(b)(i) or (ii), WAC 173-308-220 (3)(b)(i) or (ii), WAC 173-308-230 (3)(b)(i) or (ii), or WAC 173-308-240 (4)(b)(i) or (ii) were met, a description of how those requirements were met.

The following signed certification: "I certify, under penalty of law, that the vector attraction reduction requirement in (insert WAC 173-308-210 (3)(b)(i) or (ii), WAC 173-308-220 (3)(b)(i) or (ii), WAC 173-308-230 (3)(b)(i) or (ii), WAC 173-308-240 (3)(b)(i) or (ii), as applicable) has been met for each site on which biosolids were applied. This determination was made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector attraction reduction and site management requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(c) If the pollutant ceiling concentration limits in Table 1 of WAC 173-308-160 were met (but the concentration limits in Table 3 were exceeded), the information in (c)(i) through (v) of this subsection must be developed and kept indefinitely.

(i) The location, by street address if applicable, a copy of the assessor's plat map(s) with the application area(s) clearly shown or the latitude and longitude of the approximate center of each land application site, and the section, township, and range of each quarter section on which biosolids were applied.

(ii) The number of hectares in each site on which bulk biosolids were applied.

(iii) The date and time bulk biosolids were applied to each site.

(iv) The cumulative amount of each pollutant (i.e., kilograms) listed in Table 2 of WAC 173-308-160 in the bulk biosolids applied to each site, including the amount(s) in WAC 173-308-160 (2)(b)(i) and (iii).

(v) The amount of biosolids (i.e., dry metric tons) applied to each site.

(d) A description of how the requirement to obtain information under WAC 173-308-160 (2)(b) was met.

(i) The following signed certification: "I certify, under penalty of law, that the requirement to obtain information under WAC 173-308-160 (2)(b) has been met for each site on which bulk biosolids were applied. This determination was made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the requirements to obtain information have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(ii) If the biosolids that were applied to the land did not meet standards to be classified as exceptional quality, and the site management restrictions in WAC 173-308-210 (4)(b)(i) through (iii), or WAC 173-308-220 (4)(b)(i) through (iii), or WAC 173-308-230 (4)(b)(i) through (iii), or WAC 173-308-240 (4)(b)(i) through (iii) were met, the following signed certification:

"I certify, under penalty of law, that the site management restrictions in (insert WAC 173-308-210 (4)(b)(i) through (iii), or WAC 173-308-220 (4)(b)(i) through (iii), or WAC 173-308-230 (4)(b)(i) through (iii), or WAC 173-308-240 (4)(b)(i) through (iii), as applicable) were met for each site on which bulk biosolids were applied. This determination was made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the site management restrictions have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(5) When biosolids are sold or given away in a bag or other container for application to the land, the person who prepares the biosolids must develop and maintain the following information, as applicable, for five years:

(a) If the pollutant limits in Table 3 of WAC 173-308-160 were met, laboratory analysis data showing that those limits were met; or, if the pollutant ceiling concentrations in Table 1 of WAC 173-308-160 were met, laboratory analysis data showing that those limits were met.

(b) Process monitoring and/or laboratory analysis data showing that the Class A pathogen requirements in one of WAC 173-308-170 (2)(a) through (f) were met, and a description of how those requirements were met.

(c) Process monitoring and/or laboratory analysis data showing that the vector attraction reduction requirements in one of WAC 173-308-180 (2) through (7) were met, and a description of how those requirements were met.

(d) The following certification statement:

"I certify, under penalty of law, that the Class A pathogen requirement in (insert one of WAC 173-308-170 (2)(a), (b), (c), (d), (e), or (f) if Class A), and the vector attraction reduction requirement in (insert one of WAC 173-308-180 (2) through (7)) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that pathogen requirement and vector attraction reduction

requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(e) When the biosolids are subject to the requirements of WAC 173-308-160(4), the concentration in the biosolids of each pollutant listed in Table 4 of WAC 173-308-160, and the annual whole biosolids application rate that does not cause the annual pollutant loading rates in Table 4 of WAC 173-308-160 to be exceeded.

The following certification statement:

"I certify, under penalty of law, that the labeling and notification requirement in WAC 173-308-260 (1)(b)(ii) has been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the labeling and notification requirements are met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(6) When domestic septage is applied to the land, the person who applies the domestic septage must develop and maintain the following information, as applicable, for five years:

(a) The location, by street address if applicable, a copy of the assessor's plat map(s) with the application area(s) clearly shown or the latitude and longitude of the approximate center of each land application site, and the section, township and range of each quarter section on which septage is applied.

(b) The number of acres in each site on which septage is applied.

(c) The date and time septage is applied to each site.

(d) The nitrogen requirement for the crop or vegetation grown on each site during a three hundred sixty-five-day period.

(e) The rate, in gallons per acre per three hundred sixty-five-day period, at which septage is applied to each site and the total number of gallons of septage applied to each site;

(f) The source of the septage, including the name and address of the individual or business where the septage was generated, or in the case of a centralized septage treatment facility, the name of the person or business who delivered the septage, the dates of delivery, and how much septage was delivered.

(g) The class of septage as defined in WAC 173-308-080.

(h) A description of how the pathogen requirements in WAC 173-308-270 (3)(a) or (b) were met.

(i) A description of how the vector attraction reduction requirements in one of WAC 173-308-270 (4)(a), (b), or (c) were met.

(j) A description of how the applicable site management and access restriction requirements in WAC 173-308-270(5) were met.

(k) The following signed certification: "I certify, under penalty of law, that the pathogen requirements in (insert either WAC 173-308-270 (3)(a) or (b)), the vector attraction reduction requirements in (insert one of WAC 173-308-270 (4)(a), (b), or (c)), and the applicable site management and access restriction requirements in WAC 173-308-270(5) have been met. This determination has been made under my

direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen and vector attraction reduction requirements and site management and access restrictions have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-290, filed 2/18/98, effective 3/21/98.]

WAC 173-308-295 Annual reports. (1) Class I biosolids management facilities, treatment works treating domestic sewage with a design flow rate equal to or greater than one million gallons per day, and those that serve 10,000 people or more, must submit to the department by March 1 of each year, the following information for the preceding calendar year:

(a) All applicable information required under WAC 173-308-290 (2), (3) and (5);

(b) The information in WAC 173-308-290 (4)(c)(i) through (v) and WAC 173-308-290 (4)(d) and (d)(i) and (ii) when ninety percent or more of any of the cumulative pollutant loading rates in Table 2 of WAC 173-308-160 have been reached.

(2) Other facilities and treatment works treating domestic sewage that are not required to submit an annual report under WAC 173-308-295(1) must submit part or all of any applicable information in WAC 173-308-290 (1)(a) and (b) as required by the department on the written request of the department, or in accordance with the requirements of an applicable permit issued by the department.

(3) All persons who apply septage to the land must submit to the department by March 1 of each year, the following information for the preceding calendar year:

(a) The number of gallons of septage applied to the land.

(b) The number of acres of land to which septage was applied.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-295, filed 2/18/98, effective 3/21/98.]

WAC 173-308-300 Disposal of municipal sewage sludge or biosolids in municipal solid waste landfill units.

(1) When biosolids are placed in a municipal solid waste landfill unit they are considered solid waste (municipal sewage sludge).

(2) The use of municipal sewage sludge or biosolids that are subject to regulation under this chapter, as daily cover or as an amendment to daily cover is not a beneficial use and is considered disposal.

The use of biosolids as a component of landfill intermediate or final cover is considered a beneficial use if it is consistent with an approved landfill plan of operations or closure/post-closure plan.

(a) Landfills that use biosolids that do not meet standards to be classified as exceptional quality as a component of intermediate or final cover must have an approved site specific land application plan that meets the requirements of WAC 173-308-310(6) and 173-308-210, 173-308-230, or 173-308-240, as applicable.

(b) For the purposes of beneficial use on a municipal solid waste landfill unit, a site specific land application plan may recognize an approved plan of operations or closure/post-closure plan that addresses the substantive requirements of WAC 173-308-310(6) and 173-308-210, 173-308-230, or 173-308-240, as applicable.

(3) Any landfill accepting municipal sewage sludge for disposal must be in compliance with the requirements of chapter 173-351 WAC and 40 CFR Part 258.

(4) Municipal sewage sludge that is disposed in a municipal solid waste landfill must meet the liquids in landfills restrictions of WAC 173-351-200(9).

(5) Municipal sewage sludge that is disposed in a municipal solid waste landfill must not be hazardous waste as defined in chapter 173-303 WAC.

(6) Disposal on an emergency or temporary basis. Facilities wishing to dispose of municipal sewage sludge in a municipal solid waste landfill on an emergency or temporary basis must meet the conditions of (a) through (c) of this subsection and those in WAC 173-351-220(10).

(a) The person proposing to dispose of municipal sewage sludge must obtain a written determination from the local health department where the biosolids are being or would be land applied, that a potentially unhealthful circumstance exists under present conditions of management or would result from further land application of the biosolids, and that other management options are unavailable or would pose a threat to human health or the environment.

(b) Upon making the determination in (a) of this subsection, the local health department must notify the department in writing, of its findings and the basis for its determination. In its notification, the local health department must state the date on which disposal is approved to commence, any conditions, and the date after which continued disposal is prohibited.

(i) If the municipal sewage sludge is proposed to be disposed of in a municipal solid waste landfill outside the jurisdiction of the local health department in (b) of this subsection, the person proposing to dispose of the municipal sewage sludge must obtain written approval for disposal from the health department in the receiving jurisdiction.

(ii) If the jurisdictional health department in (b)(i) of this subsection, approves disposal of the municipal sewage sludge, the person proposing the disposal must forward a copy of the jurisdictional health department's determination to the department.

(c) Any person wishing to dispose of municipal sewage sludge in a municipal solid waste landfill on a temporary basis must submit a plan for approval to the department. The plan must include the following information:

(i) The conditions that make disposal necessary.

(ii) The steps that will be taken to correct the conditions in (c)(i) of this subsection, so that disposal will not become a long-term management option.

(iii) A time table for implementing the steps to be taken in (c)(ii) of this subsection.

(7) Disposal on a long-term basis.

(a) Facilities wishing to dispose of municipal sewage sludge in a municipal solid waste landfill on a long-term basis must have authorization to do so in a valid NPDES or state

waste discharge permit issued under chapter 90.48 RCW, or a valid permit issued in accordance with this chapter.

(b) Any person wishing to engage in the disposal of municipal sewage sludge in a municipal solid waste landfill on a long-term basis must meet the conditions of (b)(i) and (ii) of this subsection and those in subsections (3), (4), and (5) of this section.

(i) The person proposing to dispose of municipal sewage sludge or biosolids must demonstrate to the satisfaction of the department that other options for disposal or beneficial use are economically infeasible.

(ii) The person proposing to dispose of municipal sewage sludge must provide the department with written approval for disposal from the local health department in the receiving jurisdiction.

(8) All facilities that dispose of municipal sewage sludge in a municipal solid waste landfill must submit the information in WAC 173-308-290 (2)(j), as required under WAC 173-308-295.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-300, filed 2/18/98, effective 3/21/98.]

WAC 173-308-310 Permitting. (1) Applicable facilities—Application required.

(a) Except as provided in (a) of this subsection, all treatment works treating domestic sewage that engage in practices regulated under this chapter are applicable facilities, and must apply for an individual permit or for coverage under a general permit for the final use or disposal of biosolids.

Facilities that compost biosolids, and those facilities where only septage is applied to the land or collected and treated prior to application to the land, do not require permitting under this chapter if:

(i) A permit is not otherwise required in order to comply with the Federal Clean Water Act;

(ii) The department and local health department agree that a permit issued by the local health department will be adequate;

(iii) The conditions of the permit issued by the local health department meet or exceed the requirements of this chapter; and

(iv) The department does not otherwise find that a state issued permit is necessary because one or more of the conditions in (b)(i) through (iv) of this subsection exists.

(b) Designation as a treatment works treating domestic sewage. In addition to facilities meeting the definition of a treatment works treating domestic sewage in WAC 173-308-080, the department may designate any person, site, or facility that treats, uses, transports, or applies biosolids, as a treatment works treating domestic sewage, and require the owner or operator to apply for a permit if:

(i) The department determines that a permit is necessary to protect human health or the environment from the adverse effect of a pollutant in the biosolids;

(ii) The department determines that a permit is necessary to protect human health or the environment from poor biosolids management practices;

(iii) The department determines that a permit is necessary to ensure compliance with any of the requirements in this chapter; or

(iv) Bulk biosolids originating from a source or location outside the jurisdiction of the state of Washington are being applied to the land or received at any site.

(c) It is a violation of this chapter for a facility to fail to submit a permit application to the department as required by these rules.

(2) **General and individual permits.** The department will issue permits for the treatment and final use or disposal of biosolids.

(a) The department will issue, modify, revoke and reissue, and terminate general permits in accordance with the procedures in chapter 173-226 WAC.

(b) The department will accept and consider applications for coverage under a general permit, modify conditions of coverage, revoke and reauthorize coverage, or terminate coverage under a general permit in accordance with the provisions of this chapter.

(c) The department will issue, modify, revoke and reissue, or terminate individual permits in accordance with the provisions of this chapter.

(3) **Permit selection.**

(a) After the department has issued a general permit for the final use or disposal of biosolids, all applicable facilities must submit a notice of intent or apply for coverage under the general permit, unless:

(i) The facility has a current individual permit issued under this chapter;

(ii) The department requires a facility to apply for an individual permit; or

(iii) On written request of the applicant, the department has granted permission to apply for an individual permit.

(A) A facility may request an individual permit if a practice it proposes is not addressed in a general permit issued by the department.

(B) A facility may seek coverage under a general permit for any portion of its biosolids management practices that are applicable under the general permit, and may also request an individual permit for any portion of its biosolids management practices that are not applicable under the general permit.

(iv) The department may require any facility applying for an individual permit under (a)(iii)(A) or (B) of this subsection to limit its practices for the final use or disposal of biosolids to those that are authorized in a general permit, and to apply for a general permit.

(b) The department may notify a facility that it is covered by a general permit, even if the facility has not submitted a permit application or notice of intent as required under this subsection (3).

(i) A facility so notified may request an individual permit in accordance with the provisions of (a)(iii) of this subsection.

(ii) Facilities that are notified of coverage under (b) of this subsection must submit a notice of intent or permit application as directed by the department.

(4) **Timing of applications and notices of intent – renewal of coverage.**

(a) Except for facilities in (e)(i) and (f) of this subsection, existing facilities that are class one biosolids management facilities, publicly owned treatment works with a design flow rate equal to or greater than one million gallons per day, and

those that serve a population of 10,000 people or more must either:

(i) Submit an application for coverage under a general permit within ninety days after issuance of a biosolids general permit by the department; or

(ii) Submit a notice of intent within ninety days of issuance of an applicable general permit, followed by a complete permit application within one hundred eighty days of issuance of the applicable general permit.

(b) Except for facilities in (a), (e)(i), and (f) of this subsection, existing facilities must submit a notice of intent to be covered under a general permit within ninety days after issuance of a biosolids general permit by the department.

(c) Except for facilities in (e)(ii) and (f) of this subsection, new facilities that are class one biosolids management facilities, publicly owned treatment works with a design flow rate equal to or greater than one million gallons per day, and those that serve a population of 10,000 people or more must submit an application for coverage under a general permit or a request for an individual permit at least one hundred eighty days in advance of engaging in applicable biosolids management activities.

(d) Except for facilities in (c), (e)(ii) and (f) of this subsection, new facilities must submit a notice of intent to be covered under a general permit or a request for an individual permit at least one hundred eighty days in advance of engaging in applicable biosolids management activities.

(e)(i) Existing facilities that have not been previously permitted under this subsection that wish to request an individual permit under subsection (3)(a)(iii) of this section must do so within thirty days of issuance of a biosolids general permit by the department.

(ii) New facilities that wish to request an individual permit under subsection (3)(a)(iii) of this section must do so at least one hundred eighty days in advance of engaging in applicable biosolids management activities.

(f) Facilities that have been directed to apply for an individual permit under subsection (3)(a)(ii) of this section must submit an application for an individual permit as directed by the department, but the department will allow at least ninety days for a submittal.

(g) Facilities that are denied an individual permit must submit a notice of intent or a complete permit application for coverage under a general permit as would otherwise be required, within sixty days after being denied an individual permit unless a later date is authorized by the department.

(h) Facilities, other than those in (a) of this subsection, that have submitted a notice of intent to be covered under a general permit must submit a complete permit application as follows:

(i) Except as required under (h)(iv) of this subsection, if the facility is subject to permitting under chapter 173-216 or 173-220 WAC, a complete permit application is due on the date when an application for a state waste discharge or NPDES permit, or for renewal thereof, is due, or one hundred eighty days after issuance of the applicable general permit, whichever is later.

(ii) Except as required under (h)(iv) of this subsection, if the facility is not subject to permitting under chapter 173-216 or 173-220 WAC but is subject to permitting under chapter

173-304 WAC and local solid waste ordinances, a complete permit application is due on the date when an application for a local solid waste permit, or for renewal thereof, is due, or one hundred eighty days after issuance of the applicable general permit, whichever is later.

(iii) Other facilities that have submitted a notice of intent must submit a complete permit application as directed by the department, but the department will allow at least ninety days for a submittal.

(iv) The department may require facilities under (h)(i) and (ii) of this subsection to submit a complete permit application at an earlier date for the purpose of expediting the permitting process, or if the department finds that any of the conditions in subsection (1)(b)(i) through (iv) of this section are met. Facilities required to make an early submittal must do so within ninety days from the time of the first request unless a later date is authorized by the department.

(i) Renewal of coverage.

(A) All facilities permitted under this section must submit a notice of intent to continue coverage under a general permit or for initial coverage under a general permit, or an application for an individual permit or for renewal of an individual permit, at least one hundred eighty days prior to the expiration date of their applicable permit.

Facilities that are submitting a notice of intent must submit a complete updated permit application according to the schedule in (a) through (h) of this subsection.

(B) When a facility has made timely and sufficient notice of intent or application as required in (i) of this subsection, an expiring permit remains in effect and enforceable until:

(I) The application has been denied;

(II) A replacement permit has been issued by the department; or

(III) The department has cancelled the expired permit.

(C) Unless the department specifies otherwise in a renewing general permit, or notifies a facility directly, facilities previously covered under a general permit issued in accordance with subsection (2) of this section are automatically covered under a new general permit if they reapply for coverage in accordance with (i) of this subsection; and

(I) The facility will not implement a significant change in biosolids management practices under the new permit; and

(II) The public notice requirements of subsection (11) of this section have been met and there are no sustainable objections to continuation of coverage.

(D) For facilities that are renewing coverage under a general permit, land application plans required under subsection (6) of this section that have been previously approved are automatically approved under the new general permit as long as biosolids management practices remain consistent with the approved plan.

(E) Coverage under an expired permit for permittees who fail to submit a timely and sufficient application or notice of intent shall cease on the expiration date of the permit.

(5) Contents of permit applications – notices of intent.

(a) All facilities must submit a complete and factually correct permit application in accordance with the schedule established in subsection (4) of this section, on forms or in a format specified by the department. When complete, all per-

mit applications must contain at least the information in (a)(i) through (xi) of this subsection:

(i) The activities conducted by the applicant that require it to obtain a permit, and if applying under a general permit, the name of the permit;

(ii) Name, mailing address, and location of the facility for which the application is submitted;

(iii) The operator's name, address, telephone number, ownership status, and status as federal, state, private, public, or other entity;

(iv) Whether or not the facility or any associated facilities or land applications sites are located on Indian or federal lands;

(v) A listing of other relevant environmental permits, and all permits or construction approvals received or applied for under any of the following programs:

(A) Hazardous waste management program under the Resource Conservation and Recovery Act;

(B) Underground injection control program under the Safe Drinking Water Act;

(C) National pollutant discharge elimination system program under the Clean Water Act;

(D) Prevention of significant deterioration program under the Clean Air Act;

(E) Nonattainment program under the Clean Air Act;

(F) National emission standards for hazardous pollutants preconstruction approval under the Clean Air Act;

(G) Ocean dumping permits under the Marine Protection, Research, and Sanctuaries Act;

(H) Dredge or fill permits under section 404 of the Clean Water Act;

(vi) A map extending one mile beyond the property boundaries of the facility, showing the location and means of access to the facility, and additional maps if necessary, showing the same for any associated treatment or storage facilities.

(vii) Any biosolids monitoring data the applicant has for the last two years, including for land application sites any available soil, or surface or ground water monitoring data, with a description of the sampling locations, and for wells the approximate depth to ground water.

(viii) A description of the applicant's biosolids use and disposal practices including, where applicable, the location of any sites where the applicant transfers biosolids for treatment or disposal, as well as the name of the applicator or other contractor who applies the biosolids to land if different from the applicant;

(ix) Land application plans, as required under subsection (6) of this section;

(x) The amount of biosolids produced and the amount of biosolids applied to the land during the previous year, and estimated to be produced or applied to the land on an annual basis during the life of the permit;

(xi) Any information required to determine the appropriate standards for permitting under this chapter, and any other information the department may request and reasonably require to assess biosolids use and disposal practices, to determine whether or not to issue a permit, or to ascertain appropriate permit requirements under this chapter.

(b) A notice of intent to be covered under a general permit for biosolids recycling must contain:

(i) The name of the general permit under which coverage is being sought, and a statement declaring the applicant's intent to comply with the requirements of the permit.

(ii) The information required in (a)(i) through (iii) of this subsection, and the location and a description of any site(s) where biosolids are treated, stored, disposed, or applied, and whether or not any permit, including a local solid waste permit has been issued for a site.

(iii) Any information specifically required for a notice of intent under the applicable general permit.

(6) **Land application plans.** (a) Land application plans are not required when exceptional quality biosolids are applied to the land, except as specified in (a)(ii) or (iii) of this subsection.

(i) Any person who prepares exceptional quality biosolids for application to the land must determine and assure to the extent practicable, through recordkeeping and other means, that all applicable criteria of this chapter and any applicable permit are met when bulk exceptional quality biosolids are applied to the land.

(ii) Any person who prepares exceptional quality biosolids for application to the land and who fails to satisfy the requirements in (a)(i) of this subsection, may be required to submit a general or site specific land application plan, or both, for any or all sites where bulk exceptional quality biosolids are applied to the land, and may also be required to comply with the public notice requirements in subsection (11) of this section.

(iii) The department may require a site specific land application plan for any site where bulk exceptional quality biosolids are proposed to be applied if the plan is necessary to evaluate potential permit conditions or if the department finds there would be a strong benefit to the public from the preparation of a site specific plan.

(iv) The department may require advance notice prior to the application of bulk exceptional quality biosolids to the land. In such case the department will notify the facility in writing of the conditions requiring advance notice, the length of advance notice required, and the length of time the requirement for advance notice will remain in effect.

(b) Land application plans are required when bulk biosolids that do not meet criteria to be classified as exceptional quality are applied to the land. Except when biosolids are delivered to a beneficial use facility as provided in (g) of this subsection, facilities that propose to apply biosolids to the land that do not meet criteria to be classified as exceptional quality must either:

(i) Submit with their permit application a site specific land application plan for each site where biosolids will be applied during the life of the permit; or

(ii) Submit with their permit application a general land application plan, and at a later date prior to applying biosolids to a site, a site specific land application plan for each site where biosolids will be applied to the land;

(iii) Facilities that submit a general land application plan may also submit at the same time any available site specific land application plans for approval.

(c) All site specific land application plans must be consistent with a facility's general land application plan, if a general land application plan is required.

(d) Each site specific land application plan must provide information necessary to determine if the site is appropriate for land application of biosolids, and a description of how the site will be managed. At a minimum, site specific land application plans must address the following:

(i) In accordance with the provisions of WAC 173-308-160 (2)(b), whether or not it is known or can be determined that biosolids containing pollutants in excess of the values established in Table 3 of WAC 173-308-160 have ever been applied to the site, and if so:

(A) The date(s) when the biosolids were applied (if known);

(B) The amount of biosolids applied (if known);

(C) The concentrations of the pollutants in the biosolids (if known);

(D) The area(s) of the site to which the biosolids were applied (if known);

(ii) A discussion of the types of crops grown or expected to be grown, their intended end use (e.g., pasture grass for a feed crop, corn as a food crop), and the current distribution of crops on the site;

(iii) An explanation of how agronomic rates will be determined during the life of the site, along with any currently available calculations. Whenever agronomic rates are determined or conditions change (i.e., a change in crops or agronomic rates) an update of the agronomic rate calculations must be filed with the department;

(iv) Method(s) of application;

(v) Seasonal and daily timing of biosolids applications;

(vi) Any available data from soils, surface water, or ground water monitoring collected from the site within the last two years;

(vii) The name of the county and water resource inventory area where biosolids will be applied;

(viii) A description of how biosolids will be stored at the site and also addressing related off-site storage;

(ix) Site map(s) showing:

(A) The location and means of access to the facility;

(B) The number of acres in the site;

(C) Location and extent of any wetlands on the site;

(D) A topographic relief of the application site and surrounding area;

(E) Adjacent properties and uses and their zoning classification;

(F) Any seasonal surface water bodies located on the site or perennial surface water bodies within 1/4 mile of the site;

(G) The location of any wells within 1/4 mile of the site that are listed in public records or otherwise known to the applicant, whether for domestic, irrigation, or other purposes;

(H) The width of buffer zones to surface waters, property boundaries and other features requiring buffers;

(I) The presence and extent of any threatened or endangered species or related critical habitat;

(J) The location of any critical areas on site, as required to be identified under chapter 36.70A RCW in the county's growth management plan;

(K) The location and size of any areas that will be used to store biosolids.

(e) Except for facilities under (e)(vi) of this subsection, applicants including beneficial use facilities intending to

apply biosolids to the land that do not meet criteria to be classified as exceptional quality, to sites for which a site specific land application plan is not submitted as a part of the permit application, must submit for approval as a part of their permit application, a general land application plan that at a minimum:

- (i) Describes the geographical area covered by the plan, including the names of all counties and water resource inventory areas where biosolids may be applied;
- (ii) Identifies site selection criteria;
- (iii) Describes how sites will be managed;
- (iv) Provides for not less than thirty days advance notice to the department of new or expanded land application sites, including those subject to provisional approval under subsection (17) of this section, to allow time for the department to object prior to the biosolids application; and
- (v) Provides for advance public notice as required in subsection (11) of this section, and that is reasonably calculated to reach potentially interested adjacent and abutting property owners; except
- (vi) A general land application plan is not required when biosolids are provided to a beneficial use facility and the requirements of (g) of this subsection are met.
- (f) As individual sites are identified in accordance with the general land application plan in (6)(e) of this subsection, facilities, including beneficial use facilities applying biosolids that do not meet criteria to be classified as exceptional quality must develop and submit the information required for site specific land application plans in (d) of this subsection.
- (g) When biosolids are provided to a beneficial use facility that has been permitted as a treatment works treating domestic sewage, the person who prepares the biosolids is not required to prepare a land application plan for the biosolids that will be applied to the beneficial use facility if:
 - (i) As a part of the permit application, the person who prepares the biosolids identifies the beneficial use facility(ies) to which biosolids may be provided, or, if specific beneficial use facilities cannot be identified, specifies the criteria by which beneficial use facilities may be selected at a future date; and
 - (ii) At least thirty days in advance of delivering biosolids to the beneficial use facility the person who prepares the biosolids submits to the department a certification statement, signed in accordance with the provisions of subsection (8) of this section by the person who prepares the biosolids, stipulating the following:
 - (A) That the applicable site specific land application plan and other management plans approved for the beneficial use facility are appropriate to the quality of biosolids being provided by the person who prepared the biosolids;
 - (B) That the person who prepared the biosolids has reviewed the public notice conducted by the beneficial use facility and the conditions in subsection (11)(d) of this section have been met, or additional public notice has been conducted in accordance with subsection (11) of this section;
 - (h) All land application plans, including those authorized under provisional approval in accordance with subsection (17) of this section, are subject to review and final approval by the department. If a land application plan is found to be insufficient, the department may either request additional

information or may impose additional requirements as a condition of approval. Any additional requirements imposed under (h) of this subsection are considered to be permit requirements, fully enforceable in accordance with the provisions of this chapter and the applicable permit.

(7) Submitting permit applications and notices of intent. Facilities must submit copies of their permit application or notice of intent as follows:

- (a) The original must be submitted to the biosolids coordinator at the headquarters office of the department of ecology, and one copy must be submitted to each regional office of the department of ecology where biosolids will be treated or applied to the land.
- (b) Unless a local health department otherwise requests as provided in (b) of this subsection, one copy must be submitted to the local health department in each county where biosolids will be treated, stored, applied to the land, or disposed in a municipal solid waste landfill.

Local health departments that elect not to participate in the implementation of this chapter may notify the department in writing that they do not wish to receive copies of permit applications or land application plans.

(8) Signatories to permit applications, notices of intent, reports, and other documents.

(a) Applications. All permit applications must be signed as follows:

(i) For a corporation. By a responsible corporate officer. For the purpose of this chapter, a responsible corporate officer means:

(A) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation; or

(B) The manager of one or more manufacturing, production, or operating facilities employing more than two hundred fifty persons or having gross annual sales or expenditures exceeding twenty-five million dollars (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(ii) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively;

(iii) For a municipality, state, federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes:

(A) The chief executive officer of the agency; or

(B) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

(b) All reports required by permits, and other information requested by the department must be signed by a person described in (a) of this subsection, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(i) The authorization is made in writing by a person described in (a) of this subsection;

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant

manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters; and

(iii) The written authorization is submitted to the department.

(c) Changes to authorization. If an authorization under (b) of this subsection is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) of this subsection must be submitted to the department prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) Certification. Any person signing a document under (a) or (b) of this subsection must make the following certification, unless a different certification is applicable under another related section of this chapter:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(9) **Public access to information.** In accordance with chapter 42.17 RCW, the department must provide, upon request, any information submitted as part of an application for an individual permit or for coverage under a general permit, except as provided in (a) of this subsection.

(a) In accordance with chapters 42.17, 43.21A, 70.105, and 90.52 RCW, the department must protect any information (other than information on the quality of biosolids) contained in applications as confidential upon a showing by any person that the information, if made public, would divulge methods or processes entitled to protection as trade secrets of the person.

(b) Any information accorded confidential status, whether or not contained in any application form, must be disclosed, upon request, to the regional administrator of EPA.

(10) **Recordkeeping required for permit applications.** Applicants must keep records of all information used to complete permit applications and any supplemental information submitted for a period of five years, or longer if otherwise required by this chapter, the conditions of the applicable permit, or other state or local laws;

(11) Public notice and comment period.

(a) All facilities that are applying for coverage under a general permit, facilities applying for renewal of coverage under a general permit that propose a significant change in biosolids management practices, and those applying for an individual permit or for renewal thereof, must issue public notice within each county where they will prepare biosolids for application to the land, and except as provided in (c) and (d) of this subsection, in each county where biosolids not meeting the criteria to be classified as exceptional quality will be applied to the land. Notice must be given as follows:

(i) The applicant must publish two notices, at intervals of at least one week, in a newspaper of general circulation in each county where biosolids are proposed to be applied to the land.

(ii) The applicant must mail a copy of the notice to any person or group that has notified the applicant in writing of an interest in the applicant's biosolids management activities.

(iii) For a period of at least thirty days, beginning not later than the last date of newspaper publication required in (a)(i) of this subsection, notice must be posted at all sites identified in the permit application where bulk biosolids that do not meet the standards to be classified as exceptional quality will be applied to the land;

(A) When newspaper notice is not required for new sites being proposed in accordance with an approved general land application plan per (c) of this subsection, the thirty-day notice period in (a)(iii) of this subsection begins when the direct mail notice requirement of (a)(ii) of this subsection has been met.

(B) It is a violation of these rules for any person to remove a sign posted in accordance with the requirements of (a)(iii) of this subsection during the public notice period.

(iv) Notice must be given by any other method required by the department.

(v) At the time of the initial notice, copies of the notice and an explanation of all places where and when the notice was or will be published or posted must be submitted to:

(A) The contact person in the regional or headquarters office of the department of ecology that has lead responsibility for the permit; and

(B) The local health department in each county where biosolids will be treated, stored, applied to the land, or disposed in a municipal solid waste landfill, unless the local health department has waived receipt of notification under subsection (7)(b) of this section.

(b) Notices under (a) of this subsection must contain the information in (b)(i) through (xi) of this subsection:

(i) The name and address of the facility seeking the permit or filing a notice of intent, and a contact person;

(ii) When the local health department has accepted delegation of responsibility under WAC 173-308-050, the address of the local health department and a contact person;

(iii) The address of the regional or headquarters office of the department of ecology that has lead responsibility for the permit, and a contact person;

(iv) A brief statement of the applicant's biosolids management practices for which a permit is sought or a notice of intent is being submitted;

(v) If coverage under a general permit is being sought, the name of the general permit or the name and location of the site if notice is being given for a site specific land application plan;

(vi) The statement: "Any person wishing to comment on this application or desiring to present their views regarding this application to the department of ecology or its delegated representative must do so in writing within thirty days of the last date of newspaper publication of this notice. Comments should be addressed to (insert the name and address of the person identified in (b)(vii) of this subsection)."

(vii) The person to whom comments should be addressed is the person in (b)(vii)(A) or (B) of this subsection, whichever is appropriate;

(A) When the application or notice of intent is for coverage under a general permit or for an individual permit, the person to whom comments should be directed is the department of ecology contact in (b)(iii) of this subsection.

(B) When the proposal is for a specific land application site, the person to whom comments should be directed is the department of ecology contact in (b)(iii) of this subsection, except where responsibility has been delegated to a local health department, in which case the recipient of comments should be the local health department contact in (b)(ii) of this subsection.

(viii) A statement specifying:

(A) Whether or not the permit application contains any information about current or proposed biosolids application sites;

(B) Whether or not the permit application contains a plan specifying how future application sites will be identified;

(C) If biosolids will be provided to any other facility, including a beneficial use facility; and

(D) How the public will be notified regarding the selection of future land application sites.

(ix) The time and place of any public hearing or meeting that will be held or the procedures to request one, and other procedures by which the public may participate in the final permit decision;

(x) The means by which an interested person or organization can have their name placed on a list to be maintained by the applicant for the purpose of future notification of biosolids management activities.

On written request of the person seeking to have their name added to the list of interested parties, all facilities maintaining a list of interested persons or organizations under (b)(x) of this subsection must provide written confirmation by certified mail, return receipt requested, to each interested person or organization that their name has been placed on the list.

(xi) Any additional information considered necessary or proper.

(c) Except as provided in (d) of this subsection, public notice for a new or expanded land application site that is being proposed in accordance with an approved general land application plan must be satisfied as follows:

(i) If site specific local approval is required to be obtained through integrated project review under the State Growth Management Act and the substantive notice requirements of (b) of this subsection are met, public notice for the purposes of this rule will be satisfied by compliance with the public notice requirements of the local integrated project review process;

(ii) Public notice conducted in accordance with the State Environmental Policy Act satisfies the public notice requirements of this rule for new or expanded land application sites if the substantive requirements of (b) of this subsection are met and the site is specifically identified in an environmental checklist that is available for public review and comment;

(iii) The public notice process for new or expanded land application sites not applicable under (c)(i) or (ii) of this sub-

section must meet the requirements of (a)(ii) through (v) and (b) of this subsection.

(d) Facilities that will provide biosolids to a permitted beneficial use facility must conduct public notice in accordance with this subsection as follows:

(i) Public notice must be given when applying for an individual permit or for coverage under a general permit;

(ii) Other than sites that are part of a beneficial use facility, public notice must be given for all new or expanded sites where biosolids not meeting the criteria to be classified as exceptional quality will be applied to the land;

(iii) Facilities that provide biosolids to a permitted beneficial use facility are not required to carry out public notice specific to the land application of biosolids at the beneficial use facility if:

(A) Public notice given for the beneficial use facility identified the facility providing the biosolids; or

(B) Public notice given for the beneficial use facility clearly stated that biosolids would be accepted from unknown sources, including sources outside of the county in which the beneficial use facility is located, as applicable.

(e) Facilities applying for individual permits must complete the public notice requirements in this subsection at the time they apply for a permit and at the time when a draft permit is provided for formal review by the department.

(12) Public hearings and meetings.

(a) The department may require an applicant to hold a public hearing or meeting when applying for coverage under a general permit, for an individual permit, or for any land application plan if it finds, on the basis of requests, a significant degree of public interest, or that a public discussion might clarify one or more aspects important to compliance with the requirements of this chapter or an applicable permit.

(b) During the public comment period provided for in subsection (11) of this section, any person may request the department to require a public hearing or meeting if none has been scheduled. Any request for a public hearing or meeting must be in writing and must state the nature of the issues proposed to be raised. The department will consider all requests that are received not later than the final comment date specified in the notice required under subsection (11)(b) of this section.

(c) Notice of hearing. If the department determines that a public hearing must be held, the applicant must give notice of a public hearing in accordance with the procedures in subsection (11)(a) and (b) of this section, except that posting of sites that are not specifically subject to the hearing is not required.

(i) The notice of hearing must contain the following information:

(A) The dates of previous public notices relating to the permit application;

(B) The date, time, and place of the hearing;

(C) A brief description of the nature and purpose of the hearing, including any rules and procedures that apply.

(ii) Copies of the notice and an explanation of all places where and when the notice was published must be submitted to:

(A) The contact person in the regional or headquarters office of the department of ecology that has lead responsibility for the permit; and

(B) Any applicable local health department that has accepted delegation of authority under WAC 173-308-050.

(d) Public hearings required under this subsection, must be held in each county where biosolids will be treated or applied to the land, unless otherwise allowed by the department.

(e) Public hearings required under this subsection must be held no sooner than thirty days after the final notice of public hearing published in accordance with subsection (11)(a)(i) of this section, and at a time and place as can be reasonably expected to be convenient to the department and interested parties.

Public hearings must be attended by a representative of the permit applicant who is authorized to respond to questions from the public and the department, and by a representative of the department.

(f) Notice conducted for public meetings is the same as that required for public hearings unless otherwise allowed by the department.

(13) Record and response to comments received.

(a) The department will maintain a record of all written comments received during the public comment period in subsection (11) of this section, and of all comments properly submitted in response to a public hearing required under subsection (12) of this section.

(b) The department will prepare a response to all relevant comments received, and will briefly describe any changes that resulted (other than editorial changes) to an individual permit or to an applicant's coverage under a general permit.

(c) The department is not obligated to consider or respond to comments or information that is received later than thirty days after the initial date of publication of public notice, or the date of a public hearing, whichever is later.

(14) Additional requirements. In addition to the requirements of this chapter, the department may impose additional requirements as part of the approval process for coverage under a general permit or as conditions of an individual permit if any of the conditions in subsection (1)(b)(i) through (iv) of this section are met.

(a) Any additional requirements imposed under this subsection are considered to be permit requirements, fully enforceable in accordance with the provisions of this chapter and the applicable permit.

(b) If known, any additional requirements must be disclosed at a public hearing if a public hearing is held, or if imposed subsequent to a public hearing, must become a part of the written record required under subsection (13)(b) of this section.

(15) Compliance schedules.

(a) A permit may specify a schedule leading to compliance with the federal Clean Water Act and these regulations. Any compliance schedule under this section must require compliance as soon as possible, but not later than any applicable statutory deadline under the Clean Water Act or chapter 70.95J RCW.

(b) Interim dates. If a permit establishes a compliance schedule that exceeds one year from the date of permit issuance, the schedule must set forth interim requirements and the date for their achievement. The time between interim dates must not exceed six months.

(c) Reporting. The permit must require that no later than fourteen days after each interim date and the final date of compliance, the permittee must notify the department in writing of its compliance or noncompliance with the interim or final requirements.

(16) Fact sheet required for individual permits.

(a) The department must prepare a fact sheet for every draft individual permit for a class I biosolids management facility, for every draft individual permit requiring permit conditions developed on a case-by-case basis to implement section 405(d)(4) of the Clean Water Act, for every draft individual permit that includes a general land application plan under subsection (6)(b)(iii) of this section, and for every draft individual permit that the director finds is the subject of widespread public interest or raises major issues. The fact sheet must briefly set forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The director must send this fact sheet to the applicant and, on request, to any other person.

(b) The fact sheet must include:

(i) A brief description of the type of facility or activity that is the subject of the draft permit;

(ii) Any calculations or other necessary explanation of the derivation of conditions for biosolids use and disposal, including a citation to the applicable standards for biosolids use or disposal and reasons why they are applicable, or in the case of conditions developed on a case-by-case basis to implement section 405 (d)(4) of the Clean Water Act, an explanation of, and the bases for the conditions; and

(iii) For permits that include a general land application plan under subsection (6)(b)(iii) of this section, a brief description of how each of the required elements of the land application plan is addressed in the permit.

(17) Approval of coverage. After reviewing an application for an individual permit or for coverage under a general permit, and considering other pertinent information including any testimony received during a public hearing or meeting, or written comments submitted in response to a public notice, the department may approve coverage under a general permit or issue an individual permit.

(a) If coverage under a general permit is approved or an individual permit is issued, the department will notify the applicant in writing, conveying a final copy of the issued permit including any additional requirements or stipulations that are imposed as a condition of coverage under a general permit.

(b) If an application for an individual permit or for coverage under a general permit is disapproved, the department will notify the applicant in writing, including an explanation of why coverage was disapproved.

(c) On and after the effective date of this chapter, if there are no significant changes to biosolids management practices at an existing site, a facility may continue to apply biosolids to sites that were permitted by the local health department before the effective date of this chapter, in accordance with the requirements of the local health department, the applicable general permit, and this chapter, unless the department objects in writing.

(i) Facilities applicable under (c) of this subsection that have submitted a notice of intent to be covered or have been notified that they are covered under a general permit, and those that have applied for coverage under a general permit, are provisionally approved for coverage under an applicable general permit to apply biosolids to existing sites as permitted by the local health department and in accordance with the requirements of the applicable general permit and this chapter.

(ii) A beneficial use facility may not obtain provisional approval for coverage under a general permit, but may obtain provisional approval for existing land application sites after being permitted as a beneficial use facility.

(d) Except for provisionally approved facilities under this subitem (d), a facility may not engage in new biosolids management practices or implement significant changes to biosolids management practices at existing sites, or apply biosolids to new or expanded sites until all applicable requirements of this section including those for public notice, and public hearings or meetings, have been satisfied.

Facilities that have submitted a notice of intent or that have been notified of coverage under a general permit, or that have applied for coverage under a general permit, are provisionally approved for coverage under an applicable general permit to apply biosolids to sites consistent with the applicable requirements of this chapter and the applicable general permit and as approved by the local health department, if the public notice requirements under subsection (11) of this section have been fulfilled, and no request for a public hearing has been made or the department has denied the request, and all comments received have been resolved to the satisfaction of the local health department;

(e) Facilities with provisional approval are subject to further review and permitting requirements at a later date, and are subject at all times to all applicable conditions of this chapter and the applicable general permit.

(f) In no case may a lack of action by the department be construed as relieving an applicant of the obligation to comply with any of the provisions of this chapter or an applicable general permit, or as approving final use or disposal practices that are not consistent with the provisions of this chapter or an applicable general permit, or that pose a threat to human health or the environment.

(18) Prohibition. The department may not issue a permit when the Regional Administrator of EPA has objected in writing under 40 CFR 123.44.

(19) Duration of permits.

(a) Permits are issued for fixed terms, up to but not exceeding five years from the effective date of the permit.

(i) Coverage under a general permit may be issued for a period up to the remaining term of issuance for the permit.

(b) The term of a permit may not be extended by modification beyond five years.

(20) Transfer of permit coverage.

(a) Except as provided in (b) of this subsection, a permit may be transferred by the permittee to a new owner operator only if the permit has been modified or revoked and reissued to identify the new permittee and incorporate other requirements as may be necessary to assure compliance with the requirements of this chapter.

(b) Coverage under a permit is automatically transferred from the old permittee to a new permittee, on the date agreed to, if:

(i) A written, signed agreement, between the old and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability is submitted in accordance with the requirements of subsection (7) of this section at least thirty days in advance of the proposed date of transfer; and

(ii) The department has not notified both permittees of any objection to the transfer, or of the intent to revoke coverage under the general permit.

(c) No condition or requirement of a permit or this chapter may be waived by the transfer of permit coverage from one party to another.

(21) Modification or revocation and reissuance of individual permits and modification of conditions of coverage under a general permit.

(a) When the department receives any information (for example, upon inspection of a facility, receipt of information submitted by the permittee as required in the permit, receipt of a request for modification or revocation and reissuance, or upon a review of the permit file), the department may determine whether or not one or more of the causes listed in (b) or (c) of this subsection for modification or revocation and reissuance, or both, exist.

(i) If cause for modification or revocation and reissuance, or both, exists, the department may modify or revoke and reissue an individual permit, or modify conditions of coverage or revoke and reissue coverage under a general permit, and may request an updated application if necessary.

(ii) When an individual permit or conditions for coverage under a general permit is/are modified, only the conditions subject to modification are reopened.

(iii) If an individual permit or authorization for coverage under a general permit is revoked and reissued, the entire individual permit or consideration of coverage under a general permit is reopened and subject to revision, and the individual permit or coverage under the general permit may be reissued for a new term.

(iv) If cause does not exist under this section, the department may not modify or revoke and reissue an individual permit or conditions of coverage under a general permit.

(b) Causes for modification. The following are causes for modification but not revocation and reissuance of individual permits or authorization of coverage under a general permit except when the permittee requests or agrees.

(i) Alterations. There are material and substantial alterations or additions to the permitted facility or activity that occurred after permit issuance that justify the application of permit conditions that are different from or absent in the existing permit.

(ii) Information. The department has received new information. Individual permits or authorization of coverage under a general permit may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

(iii) New regulations. New regulations have been adopted or the standards or regulations on which the permit was based have been changed by adoption of amended standards or regulations or by judicial decision after the permit was issued.

(iv) Compliance schedules. The department determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonable available remedy. However, in no case may a compliance schedule be modified to extend beyond an applicable Clean Water Act statutory deadline.

(v) Land application plans. When required by a permit condition to incorporate a general land application plan for beneficial use of biosolids, to revise a general land application plan, or to add a general land application plan.

(c) The following are causes to modify or alternatively, revoke and reissue, an individual permit or the conditions for coverage under a general permit.

(i) Cause exists for termination under subsection (22) of this section and the department determines that modification or revocation and reissuance is appropriate.

(ii) The department has received notification of a proposed transfer of the permit.

(d) When an individual permit or coverage under a general permit is modified or revoked and reissued, the public notice requirements of subsection (11) of this section, and if required the public hearing requirements of subsection (12) of this section must be complied with for the reopened conditions or reissued permit.

(22) Termination of permits. The following are causes for terminating an individual permit or coverage under a general permit during its term, or for denying a permit renewal application:

(a) Noncompliance by the permittee with any condition of the permit;

(b) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

(c) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or

(d) A change in any condition that requires either a temporary or a permanent reduction or elimination of any activity controlled by the permit.

(23) Enforcement. Any violation of this chapter or any permit issued under this chapter, may be subject to the enforcement provisions of applicable law, including chapters 70.95 and 70.95J RCW.

(24) Appeals. Any person aggrieved by a decision of the department made in accordance with provisions of this chapter may appeal that decision only as provided by applicable law, including chapters 43.21B RCW and 34.05 RCW.

(25) Requirement to coordinate permitting with delegated local health departments. When a local health department has received delegation to administer any portion of, or to carry out any activity required under this chapter, all facilities subject to permitting under this chapter must coop-

erate with the department and the local health department by coordinating permitting activities so as to assure an opportunity for local health department involvement consistent with the terms of the delegation agreement.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-310, filed 2/18/98, effective 3/21/98.]

WAC 173-308-320 Permit fees. (1) All facilities that are required to obtain a permit under this section must pay an annual biosolids permit fee to the department of ecology.

(2) Biosolids permit fees are assessed prospectively on an annual basis and apply regardless of the date of issuance of a permit.

(3) Biosolids permit fees are assessed and collected for fiscal years and are due and payable within forty-five days after the department mails a billing statement.

(a) Failure to pay a permit fee is cause for denial of coverage under a permit or revocation of existing coverage. Fees are considered delinquent if they are not received by the first invoice billing due date. Permit holders will be notified by certified letter and have thirty days to bring their account up-to-date before further action is taken by the department.

(b) The department may at its discretion mail partial billing statements two or more times per year, in which case a facility is responsible only for the amount reflected on the current (and any past due) billing statement.

(c) Receiving-only facilities, centralized septage treatment facilities, and persons who apply septage to the land that determine a residential equivalent value under subsection (4)(b) or (c) of this section may submit periodic payments as provided in (c)(i), (ii), and (iii) of this subsection, based on the actual level of service, provided that they submit a letter to the department indicating their intent to do so.

(i) Facilities under (c) of this subsection must submit a quarterly payment and statement of actual service level within ten days of the end of each quarter (not later than the 10th day of March, June, September, and December of each year), except as provided in (c)(ii) or (iii) of this subsection.

(ii) Facilities under (c) of this subsection that estimate and provide a level of service less than three hundred residential equivalents per year are subject to a fee of \$0.00 per residential equivalent and are not required to submit periodic payments, but must submit a statement of actual service level at least once per year.

(iii) Facilities under (c) of this subsection that calculate an annual residential equivalent value equal to or greater than three hundred residential equivalents per year may withhold a payment for any quarter where the total amount due is less than fifty dollars, provided a statement of the actual service level is submitted and that all accounts are brought up-to-date by July 10th of each year.

(4) The permit fee schedule is based on the number of residences or residential equivalents (residential equivalent value) contributing to a permittee's biosolids management system, and incorporates the annual fiscal growth factor calculated under chapter 43.135 RCW.

(a) For facilities with NPDES permits issued under chapter 173-220 WAC or state waste discharge permits issued under chapter 173-216 WAC, the department will use resi-

dential equivalent values determined under chapter 173-224 WAC.

(b) The residential equivalent value for receiving-only facilities other than septage facilities in (c) of this subsection is the sum of the fraction of residential equivalent values contributed from all sources, as determined by considering the portion of the current annual biosolids production of each originating source that is provided to the receiving facility.

A receiving-only facility must determine an estimated residential equivalent value based on projected capacity as detailed in the permit application submitted under WAC 173-308-310 and the method described in (b) of this subsection.

(c) For centralized septage treatment facilities and persons who apply septage to the land, 1,250 gallons of septage received for treatment or applied to the land is equal to one residential equivalent as shown in Equation (4).

$$\text{REV} = \frac{\text{Gallons of septage received or applied to the land}}{1,250 \text{ Gallons per Residential Equivalent}} \quad \text{Equation (4)}$$

A centralized septage treatment facility and a person who applies septage to the land must determine an estimated residential equivalent value based on projected capacity as detailed in the permit application submitted under WAC 173-308-310 and the method described in (c) of this subsection.

(d) Equation (5) below is used to calculate permit fees:

$$\text{Permit Fee} = (\text{REV} \times \text{Cost per RE}_{\text{FGF}}) \text{ where:} \quad \text{Equation (5)}$$

(i) REV= residential equivalent value.

(ii) FGF= An annual fiscal growth factor expressed as a percentage, as determined under chapter 43.135 RCW.

(iii) Cost per RE_{FGF} = cost per residential equivalent in dollars including a fiscal growth factor. The cost per RE_{FGF} is obtained by multiplying the cost per residential equivalent in the preceding year by the current year's fiscal growth factor as follows in (6):

$$\text{Cost per RE}_{\text{FGF}} = \text{Previous year's cost per RE} \times [1 + (\text{FGF})] \quad \text{Equation (6)}$$

For implementation of the fiscal growth factor, the base year for all biosolids permit fees will be fiscal year 1998, ending June 30, 1998. In the base year, the FGF will be zero.

(e) Unless a lower cost is specified in a permit, the cost per residential equivalent in the base year will be as follows:

(i) \$0.00 per residential equivalent for any permit for any facility with a total residential equivalent value of less than 300, including those that would otherwise fall under (e)(ii) through (v) of this subsection.

(ii) \$0.015 per residential equivalent for a permit authorizing municipalities that own or operate incinerators that fire municipal sewage sludge to dispose of municipal sewage sludge generated by their own facility in a municipal solid waste landfill or through another facility on an emergency basis.

(iii) \$.20 per residential equivalent for permits authorizing disposal in a municipal solid waste landfill, except for facilities under (e)(ii) of this subsection.

(iv) \$0.04 per residential equivalent for permits issued to receiving-only facilities as defined in WAC 173-308-080.

(v) \$0.162 per residential equivalent for permits authorizing any other type of biosolids management activity, including but not limited to the following:

(A) Direct beneficial use by a treatment works treating domestic sewage;

(B) Transfer from one facility to another facility, including delivery of biosolids to an incinerator from nonincinerating jurisdictions;

(C) Prolonged treatment or storage, including lagoon systems;

(D) Treatment or land application of septage.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-320, filed 2/18/98, effective 3/21/98.]

WAC 173-308-900 Appendix A—Procedure to determine the annual whole biosolids application rate. When biosolids are sold or given away in a bag or other container for application to the land, and any of the pollutant concentration limits in Table 3 of WAC 173-308-160 are exceeded, the mathematical product of the concentration in the biosolids of each pollutant listed in Table 4 of WAC 173-308-160 and the annual whole biosolids application rate (AWBAR) must not cause the annual pollutant loading rate for the pollutant in Table 4 of WAC 173-308-160 to be exceeded. This appendix contains the procedure used to determine an AWBAR that does not cause the annual pollutant loading rates in Table 4 of WAC 173-308-160 to be exceeded. The relationship between the annual pollutant loading rate (APLR) for a pollutant and the annual whole biosolids application rate (AWBAR) is shown in equation (7).

$$\text{APLR} = C * \text{AWBAR} * 0.001 \quad \text{Equation (7)}$$

Where:

APLR = Annual pollutant loading rate in kilograms per hectare per 365 day period.

C = Pollutant concentration in milligrams, per kilogram of total solids (dry weight basis).

AWBAR = Annual whole biosolids application rate in metric tons per hectare per 365 day period (dry weight basis).

0.001 = A conversion factor.

To determine the AWBAR, equation (7) is rearranged into equation (8):

$$\text{AWBAR} = \frac{\text{APLR}}{C * 0.001} \quad \text{Equation (8)}$$

The procedure used to determine the AWBAR is presented below.

Procedure:

1. Analyze a sample of the biosolids to determine the concentration for each of the pollutants listed in Table 4 of WAC 173-308-160.

2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of WAC 173-308-160, calculate an AWBAR for each pollutant using equation (8).

3. The correct AWBAR is the lowest AWBAR calculated in Step 2.

[Statutory Authority: RCW 70.95J.020 and 70.95.255. 98-05-101 (Order 97-30), § 173-308-900, filed 2/18/98, effective 3/21/98.]